

Prevention and Control of Infections in the University Community

Abdulrahman Abdulbasit Opeyemi¹; *Emmanuel Ifeanyi Obeagu² and Abdulwasiu Oladele Hassan¹

¹Department of Medical Laboratory Science, Achievers University Owo.

²Department of Medical Laboratory Science, Kampala International University, Uganda

*Corresponding author: Emmanuel Ifeanyi Obeagu, Department of Medical Laboratory Science, Kampala International University, Uganda,

[Email:emmanuelobeagu@yahoo.com](mailto:emmanuelobeagu@yahoo.com), ORCID: 0000-0002-4538-0161

ABSTRACT

The pressing issue of infectious diseases in Nigerian university communities was examined in this review, where unique challenges stemming from high-density interactions and diverse campus environments necessitate targeted infection prevention and control strategies. Focusing on prevalent infections such as HIV/AIDS, malaria, tuberculosis, and the recent impact of COVID-19, with the aim of providing comprehensive recommendations that empower institutions to safeguard the health and well-being of their communities. The paper critically assesses the current prevalence and impact of infectious diseases among university students, examining existing prevention and control measures to identify strengths, weaknesses, and resource gaps. By proposing context-specific strategies, including enhanced hand hygiene practices, early testing protocols, technology integration, promotion of good hygiene, and ensuring basic amenities, the article aims to guide universities in customizing approaches based on their unique needs. The article also explores the influence of socio-economic and cultural factors on the feasibility and success of these strategies. Emphasizing the crucial role of individual responsibility and community engagement, the research seeks to foster a sustainable culture of health within Nigerian university campuses. This article contributes to the existing body of knowledge by offering practical insights and recommendations tailored to the specific challenges faced by university communities in Nigeria, ultimately promoting resilient and health-conscious educational environments.

Keywords: university community, infection, prevention, control

INTRODUCTION

A pathogen or its poisonous byproduct that infects a susceptible host by way of an animal, person, or contaminated inanimate object can be the source of an infectious disease. Globally, infectious diseases are the primary cause of morbidity and mortality [1-3]. A simple infection is when any number of agents, such as bacteria, viruses, fungi, protozoa, and worms, invade the body, replicate, and cause tissue reactions to either their presence or the toxins they release [4-6]. In contrast, an infectious disease is more complex than a

basic infection. The process is referred to as a subclinical infection when there is no change in health. As a result, an individual may be infected without having an infectious disease [7-9]. Nonetheless, an agent, typically a kind of microbe that damages a person's health, is the cause of an infectious disease in medicine. Pathogenic microorganisms, including bacteria, viruses, parasites, and fungi, are the source of infectious diseases. These diseases can be transmitted from one person to another either directly or

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indirectly [10]. The aforementioned diseases can be divided into three groups: illnesses that result in high death rates; illnesses that heavily burden populations with disabilities; and illnesses that have the potential to have catastrophic worldwide consequences due to their sudden and rapid spread [10].

Contamination of food, water, blood, or other vehicles can result in the spread of infectious diseases, as can indirect contact with surfaces, droplets, suspended residue in the air, or direct contact with diseased skin, mucous membranes, or body fluids. Among the common vectors are dogs, rodents, snails, ticks, fleas, mites, and mosquitoes. Pathogens can also spread by indirect contact with surfaces, contact with mucosal membranes, and contact with contaminated food, drink, blood, or other materials [11-14].

Public awareness of infectious diseases is crucial for disease control; a lack of knowledge about infectious diseases leads to low diagnostic rates, interruptions in treatment, stigma, and prejudice [15]. It is essential because the environment in which we live is full of innumerable unseen microorganisms that greatly increase the risk of a breakout of infectious diseases. As a result, it's important to understand health issues and how to prevent illnesses brought on by microbes [16-18].

Furthermore, the evolution of epidemiological traits and the range of disorders associated with various infectious diseases brought about new effects on population health within the framework of national and worldwide infectious disease epidemics. Infectious diseases have historically threatened the lives and health of children and adolescents [19-21].

Students in primary, junior, and senior high schools as well as the university community make up a unique group that has tight interpersonal interaction and high personnel population density, which makes them readily the source of infectious disease outbreaks in the absence of prompt control [22-24]. Schools are a gathering location for youth, and as such, they exhibit traits of a highly

susceptible population, frequent interaction, and gathering age.

Additionally, schools may be the site of infectious disease epidemics, particularly those involving respiratory disorders. Infectious illnesses are more likely to occur and spread in schools when high rates of socioeconomic development and frequent population movements are combined. Epidemics or outbreaks of infectious diseases in schools have a detrimental impact on young people's physical and mental health, in addition to disrupting the classroom and having a poor social impact [25-26]. Therefore, in order to monitor trends and create efficient prevention and control programmes, it is imperative that initiatives to address infectious diseases within this group be strengthened through this kind of review article.

The primary objective of this essay is to provide a thorough analysis of the various issues presented by infectious diseases within Nigerian university communities. It seeks to propose a multidimensional strategy for effectively preventing and controlling infections. The objective of this study is to offer customized suggestions that enable universities to reduce the likelihood of infectious outbreaks and improve the general health and well-being of their communities by examining the distinct features of university campuses. Nigerian universities encounter unique difficulties in managing infectious diseases, which are attributed to their densely populated settings and different campus environments. The value of this article is in its capacity to address current gaps in knowledge by providing practical and context-specific techniques. By examining the prevailing diseases such as HIV/AIDS, malaria, TB, and the latest consequences of COVID-19, this analysis enhances the comprehensive comprehension of health-related obstacles encountered within educational establishments [27-30]. In addition, it promotes the importance of collaborative endeavors, the allocation of resources, and the implementation of policies in order to enhance the resilience of university communities in the face of infectious

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diseases. Moreover, the review examines the frequency and consequences of infectious diseases, such as HIV/AIDS, malaria, tuberculosis, and COVID-19, within Nigerian university populations [31-34]. It evaluates the current measures in place to prevent and control infections within these institutions, identifying their strengths, weaknesses, and areas where resources are lacking. The review suggests specific strategies tailored to the local context to enhance hand hygiene practices, implement early testing protocols, incorporate technology, promote good hygiene behaviors, and ensure the availability of essential facilities. Additionally, it assesses the potential influence of socio-economic and cultural factors on the effectiveness of these proposed strategies. The review underscores the importance of individual responsibility and community

Burden of Infectious Diseases in University Communities

In Nigeria, infectious diseases remain the primary cause of morbidity and mortality. It is worth noting that there exists considerable variety in the types of infectious diseases that are prevalent in different regions of Nigeria. These variances can be attributed mostly to the diverse environmental and sociocultural factors present across the nation. The containment and mitigation of infectious diseases pose significant challenges due to their inherent contagiousness, enabling transmission through person-to-person contact or by vectors [35].

HIV/AIDS, malaria, gastroenteritis, and the most recent pandemic are widely recognized as enduring contributors to the burden of infectious diseases in Nigeria. If the necessary preventive and control measures are not put into effect, it is probable that this scenario will continue to endure in the foreseeable future [36].

A study conducted by Daramola *et al.* [37] aimed to evaluate the prevalence of HIV among university students attending ten different universities in two states located in the southwestern region of the country. The study revealed an overall prevalence rate of 0.4% among the student population. Prevalence research conducted among students in higher educational institutions

involvement in fostering a culture of health on university campuses. It addresses pertinent research questions such as the current prevalence rate and impact of infectious diseases, specifically HIV/AIDS, malaria, tuberculosis, and COVID-19, among university students in Nigeria. What context-specific strategies can be proposed to enhance hand hygiene practices, implement early testing protocols, integrate technology, promote good hygiene practices, and ensure the provision of basic amenities within university communities? How do socio-economic and cultural factors influence the feasibility and success of these proposed strategies? To what extent can fostering individual responsibility and community engagement contribute to a sustainable culture of health on Nigerian university campuses?

in southeast Nigeria revealed a prevalence rate of 3.69% among the student population [38]. A countrywide HIV prevalence of 1.4% among individuals aged 15-49 is reported by UNAIDS *et al.* [39]. In nations experiencing widespread epidemics, the human immunodeficiency virus (HIV) infection, often known as AIDS, has been shown to have detrimental effects on the education sector. Specifically, it has been found to result in the unfortunate demise of educators, elevate the incidence of teacher absenteeism, and contribute to a rise in the population of orphaned and vulnerable children. These circumstances, in turn, have been associated with reduced school attendance and an increased likelihood of school dropout among this group of children.

Regarding the prevalence of malaria, a severe parasite infection that significantly impacts the lives of vulnerable populations, particularly small children and elderly individuals residing in Sub-Saharan Africa. Erinle and Bada [40] reported an observed prevalence rate of 80.6% among students enrolled in a federal institution located in southwest Nigeria. Malaria has been observed to have a detrimental effect on academic

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achievement in regions characterized by unstable transmission of the disease. Therefore, it is possible that social, economic, and cultural growth may be hindered in these tropical regions.

According to a study conducted by Okonko *et al.* [41], the prevalence of Mycobacterium tuberculosis among university students in Port Harcourt, Nigeria was found to be 2.1%. Nigeria is presently positioned as the seventh country globally and the second country in Africa within a group of 30 nations that bear the highest burden of tuberculosis (TB). According to the World Health Organization (WHO), a total of 99,799 cases were reported in the country in the year 2012. The states that saw the most impact were Lagos, Kano, Oyo, and Benue State. Tuberculosis (TB) was officially recognized as an epidemic in Nigeria in the year 2006. Subsequently, numerous efforts have been made to mitigate the prevalence of this illness within the country [42]. The educational sector has been significantly impacted by the recent COVID-19 epidemic, as a result of lockdown measures. In response to the easing of these restrictions, some Nigerian schools have undertaken assessments to determine the extent of infection among their university students. According to a research conducted at Achievers University, a sample size of 200 students

Infection Prevention and Control Strategies in University communities

Controlling infectious outbreaks poses distinctive issues within the context of university campuses. A significant proportion of asymptomatic infections among university students, primarily attributed to their young age, along with frequent high-density encounters, such as communal dining in large cafeterias and numerous social activities, can facilitate the rapid spread of diseases [46]. Maintaining surveillance of these particular types of interactions poses intrinsic challenges, hence diminishing the efficacy of contact tracing efforts. It is anticipated that the effects of intervention measures will differ among various

Hand Hygiene

The practice of hand hygiene, whether by hand disinfection or hand washing,

was examined to determine the prevalence of COVID-19. The findings revealed that a mere 1% of the population tested positive for the virus at the conclusion of the study [43]. Similarly, gastroenteritis, a condition characterized by severe diarrhea, is caused by various agents such as human intestinal parasites, viruses, and bacteria. This has been observed among university students, as reported by Ohaeri and Orji [44], who noted a high prevalence of helminths among undergraduate students at Michael Okpara University of Agriculture Umudike. According to a study conducted by Ejinaka *et al.* [45], it was found that the prevalence of parasites among students at the Federal School of Medical Laboratory Science in Jos was 43%.

This section of the article highlights the prevalence of infections caused by various microorganisms within university communities, particularly in Nigeria. It emphasizes that certain educational institutions lack sufficient resources to screen students for early detection of infections, possess adequate healthcare facilities to manage such cases, or require screening test results from recommended hospitals prior to admitting students. Consequently, this situation poses a potential risk for the spread of infections, which could contribute to an increase in the country's infection incidence rate, morbidity, and possibly mortality.

university campuses due to the diversity in campus characteristics, including compliance levels, available resources, prevalence of specific infections within the community, ventilation infrastructure, and the presence of other interventions implemented on the campuses [46]. Therefore, it is imperative to provide a comprehensive recommendations to university communities for infection prevention control strategies. This would enable each institution to customize the approach according to their individual needs, so effectively mitigating the breakout of infections within the country.

continues to be of utmost importance in the management and prevention of

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infections. This task can be accomplished with or without the utilization of water, alternative liquids, or soap. In circumstances where access to tap water and soap is limited, such as in specific regions of impoverished nations or during outdoor recreational activities, other methods can be employed. These methods encompass the utilization of water sourced from suspended containers like jerrycans or gourds, as well as the substitution of water with ash as a cleansing agent [47]. According to Mathur [48], adhering to appropriate hand hygiene practices is a critical and cost-effective measure in mitigating the occurrence of infection and the transmission of antibiotic resistance, including multi-resistant *Staphylococcus aureus* (MRSA). Recognizing the significance of hand hygiene in mitigating the transmission of infections, it is imperative for universities to establish collaborations with their respective science, engineering, and mass communication departments. This

Early Testing

The transmission of an infectious disease is contingent upon a substantial frequency of interactions between infected individuals and other members of the population, along with a significant degree of dispersion of these interactions throughout the population. Early and precise diagnosis of the infection and identification of the causative organism are crucial in order to implement appropriate interventions, such as isolation and quarantine measures, to effectively contain the infection and mitigate its transmission [49]. Therefore, it is imperative for university communities to prioritize the implementation of comprehensive testing protocols for both

Use of technology

The integration of technology within university communities can serve as a means to alleviate the issue of overcrowding in regular classrooms and lectures that experience a significant influx of students. The implementation of internet-based teaching models has been suggested as a potential strategy to mitigate the risk of transmission of infections [50]. If it can be done during a

collaboration aims to facilitate the local production of soaps, hand sanitizers, and wash hand basins, as observed during the COVID-19 pandemic. These ongoing initiatives are intended for utilization within the university community, encouraging widespread adoption by all individuals on campus. The responsibility of promoting awareness and education regarding hand hygiene within the university community, including periodic sensitization during each semester and campus events, should be within the purview of the mass communication department of the institution while also charging students and staff of the university to take proper responsibility of their own health. This department is tasked with disseminating information through the display of info graphic materials at strategic locations, highlighting the significance of hand hygiene, methods for its implementation, and the associated benefits.

staff and students. This includes routine testing and surveillance measures to detect and monitor the prevalence of epidemic infections within the region prior to the start of the semester. This can be achieved by utilizing university clinics or allocating a portion of student fees to establish partnerships with tertiary hospitals, diagnostic facilities, and national testing centers. These collaborations would enhance the reliability of the testing process and enable the tracking of persons within the institution who have tested positive while initiating appropriate intervention for such individuals.

pandemic, it can also be done in our everyday classrooms. All that is needed is a genuine attempt on the part of university administration, a uniform set of guidelines for usage and execution, and ongoing assessment and monitoring to determine its impact. In addition to this particular role, it is imperative that technology, in conjunction with the university's ICT departments, assumes the responsibility

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of developing an effective data-driven and monitoring system for all individuals within the campus community. This system should accurately document and

Good Hygiene Practice

Better hygiene and sanitation measures used within educational environments have proven to be efficacious in the prevention of disease, containment of pathogen transmission, and promotion of overall well-being. The recognition of the promotion of good hygiene and sanitation practices as a cost-effective, easily implemented, convenient, and beneficial public health approach for preventing and controlling the transmission of infectious diseases and promoting overall well-being is well-established [51]. The provision of such information should be presented in a visually appealing, easily comprehensible, and precise manner. It is recommended that public spaces prominently exhibit sizable posters using vibrant hues and carefully selected statements relevant to health and cleanliness, with the aim of providing comprehensive education to the

Provision of Basic Amenities

In order to effectively address the issue of infectious disease, it is imperative for any academic institution to prioritize the provision of essential facilities to its university communities. These facilities include a clean and easily accessible water supply, strategically placed on-site bins, sanitary toilets, well-ventilated lecture theaters and hostels, as well as a robust waste management system that does not pose a public health risk to the community [53]. In order to adequately cater to the requirements of the university community, it is imperative for the Nigerian University Commission to establish partnerships with pertinent health agencies. This collaboration is essential to incorporating standardized,

In conclusion, this research underscores the imperative for Nigerian universities to address the multifaceted challenges posed by infectious diseases within their communities. The prevalence rates of diseases such as HIV/AIDS, malaria, tuberculosis, and the recent impact of COVID-19 necessitate a targeted and

track the testing history of each individual, thereby facilitating efficient contact tracing in the event of an outbreak.

general public. According to Kericho and Rebecca [52], educational institutions should display posters conveying information related to many aspects such as hand hygiene, the use of waste receptacles, maintenance of sanitary conditions in toilet facilities, and safeguarding water resources. In addition, it is recommended that universities establish a monitoring team to oversee and enforce student compliance with good hygiene practices. This team should conduct regular and unannounced inspections of both on-campus and off-campus residences where students may reside. Furthermore, it is advisable to implement a reward system coupled with community service penalties for students who fail to adhere to these hygiene practices.

comprehensive procedures that can mitigate the spread of infection as part of accreditation and renewal of accreditation for Nigerian universities. Primarily, it is crucial for individuals to recognize that health is a matter of personal concern, which can have implications for the broader community if not attended to at the individual level. Consequently, universities should facilitate an environment wherein all individuals are empowered to assume responsibility for fostering wellness within the university system. This entails embracing a receptiveness to novel ideas that can consistently enhance the health and well-being of both individuals and the public at large within the campus community.

CONCLUSION

adaptive approach to infection prevention and control. The unique characteristics of university campuses, marked by high-density interactions and diverse environments, require tailored strategies that go beyond generic measures. The proposed recommendations encompass a spectrum of interventions, ranging from

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enhancing hand hygiene practices to implementing early testing protocols, integrating technology, promoting good hygiene, and ensuring the provision of basic amenities. These strategies, when customized to suit the specific needs and characteristics of each institution, can fortify the resilience of university communities against infectious outbreaks. Socio-economic and cultural factors significantly influence the success of these strategies. Understanding these contextual nuances is pivotal for effective implementation. Collaboration between educational institutions and health agencies, as well as the incorporation of infection prevention measures into accreditation criteria, can bolster the commitment to creating and sustaining a healthy campus environment. Moreover, fostering a culture of health requires the active participation of individuals within the university community. By emphasizing

personal responsibility and community engagement, this review advocates for a holistic approach to infection prevention. Establishing monitoring teams, conducting regular inspections, and implementing reward systems for hygiene compliance contribute to the creation of a health-conscious environment. As universities grapple with the aftermath of the COVID-19 pandemic and the ongoing challenges posed by other infectious diseases, this paper serves as a practical guide for administrators, policymakers, and stakeholders. By prioritizing the health and well-being of their communities, Nigerian universities can not only mitigate the immediate risks of infectious outbreaks but also contribute to the broader public health landscape. Ultimately, this article aspires to inspire and facilitate a paradigm shift towards a sustainable culture of health within Nigerian university campuses.

REFERENCES

1. van Seventer, J. M. and Hochberg, N. S. (2017). Principles of Infectious Diseases: Transmission, Diagnosis, Prevention, and Control. *International Encyclopedia of Public Health*, 22-39. <https://doi.org/10.1016/B978-0-12-803678-5.00516-6>
2. Obeagu, E. I., Obeagu, G. U., Akinleye, C. A. and Igwe, M. C. (2023). Nosocomial infections in sickle cell anemia patients: Prevention through multi-disciplinary approach: A review. *Medicine*, 102(48), e36462.
3. Obeagu, E. I. (2022). COVID 19: Factors Associated with Implementation and Practice of Covid-19 Prevention. *Int. J. Adv. Multidiscip. Res*, 9(9), 37-42.
4. Garg, R. (2020). Infectious Disease | Definition, Types, & Causes | Britannica. In *Encyclopædia Britannica*. <https://www.britannica.com/science/infectious-disease>
5. Obeagu, E. I. (2023). Tuberculosis diagnostic and treatment delays among patients in Uganda. *Health Science Reports*, 6(11), e1700.
6. Nwosu, D. C., Obeagu, E. I., Ezeama, M. C., Ibebuike, J. E., Agu, G. I. and Uduji, H. I. (2015). Knowledge on Aetiology of Nosocomial Infections Among Health Staff at Aboh Mbaise General Hospital Imo State Nigeria. *World Journal of Pharmaceutical Research*, 4(5), 200-208.
7. Obeagu, E. I. and Obeagu, G. U. (2023). A Review of knowledge, attitudes and socio-demographic factors associated with non-adherence to antiretroviral therapy among people living with HIV/AIDS. *Int. J. Adv. Res. Biol. Sci*, 10(9), 135-42.
8. Obeagu, E. I., Obeagu, G. U., Chukwueze, C. M., & Ngwoke, A. O. (2023). Inappropriate use of personal protective equipment among health workers: A review of associated factors. *Int. J. Curr. Res. Chem. Pharm. Sci*, 10(8), 27-34.
9. Obeagu, E. I., Scott, G. Y., Amekpor, F., Ofodile, A. C., Edoho, S. H. and Ahamefula, C. (2022). Prevention of New Cases of Human Immunodeficiency Virus: Pragmatic Approaches of Saving Life in Developing Countries. *Madonna*

<https://www.inosr.net/inosr-experimental-sciences/>

- University journal of Medicine and Health Sciences* ISSN: 2814-3035, 2(3), 128-134.
10. World Health Organisation. (2023). *WHO EMRO | Infectious diseases | Health topics*. www.emro.who.int/health-topics/infectious-diseases/index.html
 11. Drexler, M. (2010). *How Infection Works*. Nih.gov; National Academies Press (US). <https://www.ncbi.nlm.nih.gov/books/NBK209710/>
 12. Obeagu, E. I. and Onuoha, E. C. (2023). A review of factors influencing the utilization of HIV/AIDS prevention methods among secondary school students. *Int. J. Adv. Multidiscip. Res*, 10(10), 49-55.
 13. Obeagu, E. I. and Onuoha, E. C. (2023). Tuberculosis among HIV Patients: A review of Prevalence and Associated Factors. *Int. J. Adv. Res. Biol. Sci*, 10(9), 128-134.
 14. Hassan, A. O., Omojola, T. E., Adeyemo, A. T. and Obeagu, E. I. (2023). An update on Monkeypox in Africa. *Int. J. Curr. Res. Med. Sci*, 9(2), 21-34.
 15. Liu, H., Li, M., Jin, M., Jing, F., Wang, H. and Chen, K. (2013). Public awareness of three major infectious diseases in rural Zhejiang province, China: a cross-sectional study. *BMC Infectious Diseases*, 13(1). <https://doi.org/10.1186/1471-2334-13-192>
 16. Odo, M., Ochei, K. C., Obeagu, E. I., Barinaadaa, A., Eteng, U. E., Ikpeme, M. ... and Paul, A. O. (2020). TB Infection Control in TB/HIV Settings in Cross River State, Nigeria: Policy Vs Practice. *Journal of Pharmaceutical Research International*, 32(22), 101-109.
 17. Chukwueze, C. M., Udeani, T. K., Obeagu, E. I., Ikpenwa, J. N., & Nneka, A. (2022). Prevalence of Methicillin Resistant Staphylococcus aureus Infections among Hospitalized Wound Patients from Selected Tertiary Hospitals within Enugu Metropolis. *Journal of Advances in Medical and Pharmaceutical Sciences*, 24(3), 18-27.
 18. Jakheng, S. P. E., Obeagu, E. I., Abdullahi, I. O., Jakheng, E. W., Chukwueze, C. M., Eze, G. C. ... and Kumar, S. (2022). Distribution Rate of Chlamydial Infection According to Demographic Factors among Pregnant Women Attending Clinics in Zaria Metropolis, Kaduna State, Nigeria. *South Asian Journal of Research in Microbiology*, 13(2), 26-31.
 19. Wang, X., Liu, J., Wang, Y., Su, B., Chen, M., Ma, Q., Ma, T., Chen, L., Zhang, Y., Dong, Y., Song, Y. and Ma, J. (2023). Enhancing the effectiveness of infectious disease health education for children and adolescents in China: a national multicenter school-based trial. *BMC Public Health*, 23(1). <https://doi.org/10.1186/s12889-023-16000-3>
 20. Chukwueze, C. M., Obu, J. O., & Obeagu, E. I. (2023). Isolation and identification of bacteria from surgical wound attention at Enugu State University Teaching Hospital, Enugu. *Int. J. Curr. Res. Chem. Pharm. Sci*, 10(8), 35-43.
 21. Opeyemi, A. A. and Obeagu, E. I. (2023). Regulations of malaria in children with human immunodeficiency virus infection: A review. *Medicine*, 102(46), e36166.
 22. Feng, N., Luo, J., & Li, H. (2015). Behaviours related to infectious disease and family factors in primary and middle school students. *Journal of Central South University. Medical Sciences*. 40(1672-7347):681-687.
 23. Jakheng, S. P. E., Obeagu, E. I., Jakheng, E. W., Uwakwe, O. S., Eze, G. C., Obeagu, G. U. ... and Kumar, S. (2022). Occurrence of Chlamydial Infection Based on Clinical Symptoms and Clinical History among Pregnant Women Attending Clinics in Zaria Metropolis, Kaduna

- State, Nigeria. *International Journal of Research and Reports in Gynaecology*, 5(3), 98-105.
24. Viola, N., Hassan, S., Nuru, N. and Obeagu, E. I. (2023). Factors associated with inappropriate use of personal protective equipment among health Workers in labour, medical and surgical wards at Mbarara regional referral hospital. *Int. J. Curr. Res. Med. Sci*, 9(5), 13-21.
25. Wieland, M. L., Weis, J. A. and Olney M. W. (2011). Screening for tuberculosis at an adult education center: results of a community-based participatory process. *American Journal of Public Health*. 101(7):1264-1267. doi: 10.2105/AJPH.2010.300024
26. Chukwueze, C. M., Udeani, T. K., Obeagu, E. I. and Asogwa, N. (2022). Antibiotic Susceptibility Pattern of Methicillin Resistant Staphylococcus Aureus in Hospitalized Wound Patients in Selected Tertiary Hospitals in Enugu Metropolis.
27. Obeagu, E. I., Obeagu, G. U. and Nwosu, D. C. (2016). Hepatitis B and Hepatitis C viral infection: A Review. *Int. J. Curr. Res. Chem. Pharm. Sci*, 3(11), 10-21.
28. Odo, M., Ochei, K. C., Obeagu, E. I., Barinaadaa, A., Eteng, E. U., Ikpeme, M., ... & Paul, A. O. (2020). Cascade variabilities in TB case finding among people living with HIV and the use of IPT: assessment in three levels of care in cross River State, Nigeria. *Journal of Pharmaceutical Research International*, 32(24), 9-18.
29. Nakyeyune, S., Ikpenwa, J. N., Madekwe, C. C., Madekwe, C. C., Tolulope, A. A., Ajayi, D. T. ... and Hassan, A. O. (2022). COVID 19 Omicron: The Origin, Presentation, Diagnosis, Prevention and Control. *Asian Journal of Research in Infectious Diseases*, 25-33.
30. Ezeoru, V. C., Enweani, I. B., Ochiabuto, O., Nwachukwu, A. C., Ogbonna, U. S. and Obeagu, E. I. (2021). Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International*, 33(4), 10-19.
31. Maureen, C. C., Obu, J. O. and Obeagu, E. I. Sensitivity of bacteria from surgical wound Infection at Enugu State University Teaching Hospital. *ACADEMIC JOURNAL*.
32. Hassan, A. O., Oso, O. V., Obeagu, E. I. and Adeyemo, A. T. (2022). Malaria Vaccine: Prospects and Challenges. *Madonna University journal of Medicine and Health Sciences ISSN: 2814-3035*, 2(2), 22-40.
33. Obeagu, E. I., Ogbonna, U. S., Nwachukwu, A. C., Ochiabuto, O., Enweani, I. B. and Ezeoru, V. C. (2021). Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International*, 33(4), 10-19.
34. Hassan, A. O., Obeagu, E. I., Ajayi, D. T., Tolulope, A. A., Madekwe, C. C., Madekwe, C. C. ... and Nakyeyune, S. COVID 19 Omicron: The Origin, Presentation, Diagnosis, Prevention and Control.
35. Adekanmbi, O., Fowotade, A., Ogunbosi, B. and Oladokun, R. (2019). Blueprint for Health Security in Nigeria by 2050: Infectious Diseases Perspective. *African Journal of Medicine and Medical Sciences*, 48(Supplement 1), 73-79. <https://ojshostng.com/index.php/ajmms/article/view/1492>
36. CDC. (2019). CDC Global Health - Nigeria. CDC. <https://www.cdc.gov/globalhealth/countries/nigeria/default.htm>
37. Daramola, G. O., Oluyeye, A. O., Edogun, H. A., Ojerinde, A. O., Olofinbiyi, B. A., Ajayi, A. O., Ajala, O. O., Ogunfolakan, O., Egbibi, A., Esan, C. O. and Agbaje, A. O. (2017). Prevalence of Antibodies to HIV among Students of Selected

<https://www.inosr.net/inosr-experimental-sciences/>

- Tertiary Schools in Two Southwest States, Nigeria. *Journal of Biosciences and Medicines*, 05(08), 83-96.
<https://doi.org/10.4236/jbm.2017.58007>
38. Emeka-Nwabunnia, I., Ibeh, B. O. and Ogbulie, T. E. (2014). High HIV sero-prevalence among students of institutions of higher education in Southeast Nigeria. *Asian Pacific Journal of Tropical Disease*, 4(2), 159-165.
[https://doi.org/10.1016/S2222-1808\(14\)60334-0](https://doi.org/10.1016/S2222-1808(14)60334-0)
39. UNAIDS. (2019). New survey results indicate that Nigeria has an HIV prevalence of 1.4%. www.unaids.org.
https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2019/march/20190314_nigeria
40. Erinle, B. A. and Bada, E. O. (2023). Prevalence of malaria infection amongst students of a southwest Nigerian federal university. *GSC Advanced Research and Reviews*, 15(1), 110-114.
<https://doi.org/10.30574/gscarr.2023.15.1.0056>
41. Okoro, S., Clement, E., David, J., Abolurin, B. and Seth, O. (2023). Prevalence and Associated Factors of Sars-COV-2 among Students in Private Universities in Rivers State, Nigeria. *Journal of Advances in Medicine and Medical Research*. 35. 10.9734/jammr/2023/v35i175114.
42. Ogbeyi, G. O., Chikaike, O., Saliu, I. & Ifedigbo, A. (2020). Factors in Tuberculosis Prevention Among Students of Benue State University Makurdi, North Central Nigeria. *The Nigerian Health Journal*, 20(2), 54-64.
<https://www.tnhjph.com/index.php/tnhj/article/view/482/pdf>
43. Etafo, J., Gbenga-Ayeni, O., Obeagu, E., Oso, O., Adeyemo, A. and Hassan, A. (2023). Prevalence of SARS-COV-2 units among Achievers University Students, Nigeria. 3: 69-76.
44. Ohaeri, C. and Orji, N. (2013). Intestinal Parasites among Undergraduate Students of Michael Okpara University of Agriculture, Umudike Abia State, Nigeria. *World Applied Sciences Journal*, 25(8), 1171-1173.
<https://doi.org/10.5829/idosi.wasj.2013.25.08.1413>
45. Ejinaka, O., Uchejeso, O., Jwanse, RIE., Lote-Nwaru, J.P., Nkop P. and Agbalaka P.E. (2019). Prevalence of Intestinal Parasites among Students of a Tertiary Institution in Jos, Nigeria. *Journal of Bacteriology & Parasitology*. 10. 10.35248/2155-9597.19.10.360.
46. Sang Woo Park, Irimi Daskalaki, Izzo, R. M., Aranovich, I., te, J. W., Notterman, D. A., Metcalf, J. E. & Grenfell, B. T. (2023). Relative role of community transmission and campus contagion in driving the spread of SARS-CoV-2: Lessons from Princeton University. *PNAS Nexus*, 2(7).
<https://doi.org/10.1093/pnasnexus/pgad201>
47. Sushilendra, K.C., Rita, C., Matin, A. K. and Shweta, C. (2017). Hand hygiene: An effective tool to control infection. *International Journal of Multidisciplinary Education and Research*. 2(2): 94-98
48. Mathur, P. (2011). Hand hygiene: Back to the basics of infection control. *The Indian Journal of Medical Research*, 134(5), 611-620.
<https://doi.org/10.4103/0971-5916.90985>
49. Liji, T. and Danielle, E. (2022). *How Important is Early Detection to the Spread of Infections?* News-Medical.net. <https://www.news-medical.net/health/How-Important-is-Early-Detection-to-the-Spread-of-Infections.aspx>
50. Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5-22. Sagepub.
<https://doi.org/10.1177/0047239520934018>

<https://www.inosr.net/inosr-experimental-sciences/>

51. Kabir, A., Roy, S., Begum, K., Kabir, A. H. and Miah, M. S. (2021). Factors influencing sanitation and hygiene practices among students in a public university in Bangladesh. *PLOS ONE*, 16(9), e0257663. <https://doi.org/10.1371/journal.pone.0257663>
52. Kericho, J. and Rebecca, K. (2016). The Implementation of Hygiene Practices in Early Childhood Education Centers in Londiani Sub-County, Kericho County. *International Journal of Education, Learning and Development*, 4, 46-52.

<https://www.eajournals.org/wp-content/uploads/The-Implementation-of-Hygiene-Practices-in-Early-Childhood-Education-Centers-in-Londiani-Sub-County-Kericho-County.pdf>

53. Pradhan, N. A., Mughis, W., Ali, T. S., Naseem, M. & Karmaliani, R. (2020). School-based interventions to promote personal and environmental hygiene practices among children in Pakistan: protocol for a mixed methods study. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-08511-0>

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