

## Climate Variability and HIV: Implications for Control Measures

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### Abstract

Climate variability presents a complex and evolving challenge to global health, with implications for the transmission dynamics of HIV/AIDS. This review examines the intersection of climate variability and HIV/AIDS, exploring the ways in which environmental changes influenced by climate variability impact the spread of the virus. Additionally, we investigate the implications of climate variability for HIV/AIDS control measures, including prevention, treatment, and healthcare delivery. By understanding the complex interplay between climate variability and HIV/AIDS, policymakers, healthcare providers, and communities can develop targeted interventions and adaptation strategies to mitigate the impact of environmental changes on HIV transmission and improve public health outcomes.

**Keywords:** *Climate Variability, HIV/AIDS, Control Measures, Adaptation Strategies, Public Health, Environmental Health*

### Introduction

Climate variability, characterized by fluctuations in temperature, precipitation, and extreme weather events, poses significant challenges to global health and well-being. The impact of climate variability extends beyond environmental concerns, affecting various aspects of human health, including the transmission dynamics of infectious diseases such as HIV/AIDS. Understanding the intersection of climate variability and HIV/AIDS is crucial for developing effective control

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measures and adaptation strategies to mitigate the impact of environmental changes on disease transmission and public health outcomes. Environmental factors influenced by climate variability play a significant role in shaping the transmission dynamics of HIV/AIDS. Changes in temperature and precipitation patterns can impact the survival and transmission of the virus, affecting the risk of infection among vulnerable populations. Additionally, extreme weather events such as floods, droughts, and hurricanes can disrupt healthcare delivery systems, displacement communities, and exacerbate socio-economic vulnerabilities, all of which can contribute to increased HIV transmission rates.<sup>1-10</sup>

The implications of climate variability for HIV/AIDS control measures are multifaceted and complex. Prevention strategies, including condom distribution, needle exchange programs, and behavior change interventions, may be affected by changes in environmental conditions and resource availability. Similarly, access to HIV/AIDS treatment and care, including antiretroviral therapy (ART) and healthcare delivery, may be compromised by climate-related disruptions to healthcare infrastructure and services. Adaptation strategies are essential for addressing the intersection of climate variability and HIV/AIDS control measures. These strategies encompass a range of interventions aimed at enhancing adaptive capacity, reducing vulnerability, and improving public health outcomes in the face of changing environmental conditions. By prioritizing adaptation measures and developing innovative approaches, policymakers, healthcare providers, and communities can mitigate the impact of climate variability on HIV transmission and improve resilience to environmental changes.<sup>11-20</sup>

### **Climate Variability and HIV Transmission**

Climate variability, characterized by fluctuations in temperature, precipitation, and extreme weather events, plays a significant role in shaping the transmission dynamics of HIV/AIDS. The influence of climate variability on HIV transmission is multifaceted, encompassing direct and indirect pathways that impact the vulnerability of populations to infection. Understanding these complex interactions is crucial for developing targeted interventions and adaptation strategies to mitigate the impact of environmental changes on HIV transmission and improve public health outcomes. Direct impacts of climate variability on HIV transmission include changes in temperature and humidity levels, which can affect the viability and survival of the virus outside the human body. Higher temperatures may increase the stability of HIV in bodily fluids, potentially prolonging its viability and enhancing the likelihood of transmission during sexual activity or through contaminated needles. Similarly, variations in humidity levels may influence the environmental conditions conducive to HIV transmission, particularly in regions with high humidity where the virus may survive for longer periods. Indirect impacts of climate variability on HIV transmission are mediated through changes in environmental and socio-economic factors that influence vulnerability to infection. Changes in rainfall patterns and water availability can impact access to clean water and sanitation, affecting hygiene practices and increasing the risk of opportunistic infections among individuals living with HIV/AIDS. Moreover, extreme weather events such as floods, droughts, and hurricanes can disrupt healthcare delivery systems, displacement communities, and exacerbate socio-economic vulnerabilities, all of which contribute to increased HIV transmission rates. Population displacement resulting from climate-related

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disasters or environmental degradation can also contribute to the spread of HIV/AIDS by disrupting social networks, increasing risk-taking behaviors, and limiting access to healthcare services. Displaced populations are often faced with overcrowded living conditions, inadequate sanitation facilities, and limited access to HIV testing, treatment, and prevention programs, all of which increase their vulnerability to infection. Additionally, migration patterns driven by climate variability may lead to the spatial redistribution of HIV/AIDS, potentially exacerbating the epidemic in new areas.<sup>20-60</sup>

### **Implications for HIV/AIDS Control Measures**

The intersection of climate variability and HIV/AIDS presents significant implications for control measures aimed at preventing the spread of the virus, ensuring access to treatment and care, and improving overall public health outcomes. Understanding these implications is essential for developing adaptive strategies and policies that address the dynamic nature of the HIV/AIDS epidemic in the context of changing environmental conditions. Climate variability can influence the effectiveness of HIV/AIDS prevention strategies, including condom distribution, needle exchange programs, and behavior change interventions. Changes in environmental conditions, such as temperature and precipitation patterns, may impact the availability and distribution of prevention resources, as well as the uptake of preventive behaviors among at-risk populations. Adapting prevention strategies to address the specific vulnerabilities of populations affected by climate variability is crucial for mitigating the risk of HIV transmission. Climate variability can disrupt healthcare delivery systems and infrastructure, affecting access to HIV/AIDS treatment and care services, including antiretroviral therapy (ART) and healthcare facilities. Extreme weather events, such as floods, hurricanes, and droughts, may damage healthcare infrastructure, interrupt drug supply chains, and displace healthcare workers and patients, leading to gaps in treatment and care. Ensuring continuity of HIV/AIDS services during climate-related emergencies requires robust adaptation measures, including emergency preparedness planning, stockpiling of essential medications, and alternative service delivery mechanisms, such as mobile clinics and telemedicine. Climate variability can impact healthcare delivery systems, affecting the capacity of healthcare facilities to provide HIV/AIDS services and respond to the needs of affected populations. Healthcare facilities may face challenges such as power outages, water shortages, and transportation disruptions during extreme weather events, limiting their ability to deliver essential services. Strengthening healthcare infrastructure, building climate-resilient healthcare facilities, and integrating climate risk assessments into healthcare planning and delivery are essential for ensuring the continuity of HIV/AIDS services and improving healthcare access and quality in the face of changing environmental conditions.<sup>61-100</sup>

Climate variability can exacerbate socio-economic vulnerabilities and increase the risk of HIV/AIDS among marginalized populations, including women, children, and communities living in poverty. Displaced populations, in particular, are often at heightened risk of HIV transmission due to disruptions in social networks, loss of livelihoods, and limited access to healthcare services. Building community resilience, promoting social protection measures, and addressing underlying determinants of vulnerability, such as poverty, inequality, and discrimination, are essential for reducing the impact of climate variability on HIV/AIDS and improving health outcomes among

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affected populations. Developing adaptive strategies that address the intersection of climate variability and HIV/AIDS control measures is critical for mitigating the impact of environmental changes on disease transmission and improving public health outcomes. These strategies may include integrating climate resilience considerations into HIV/AIDS programming, mainstreaming climate risk assessments, and strengthening healthcare systems to enhance adaptive capacity and response mechanisms. Collaboration between policymakers, healthcare providers, researchers, and communities are essential for developing context-specific adaptation strategies that address the unique challenges posed by climate variability and HIV/AIDS.<sup>101-120</sup>

### **Adaptation Strategies**

Adaptation strategies are crucial for addressing the intersection of climate variability and HIV/AIDS and mitigating the impact of environmental changes on disease transmission and public health outcomes. These strategies encompass a range of interventions aimed at enhancing adaptive capacity, reducing vulnerability, and improving resilience within communities. Strengthening healthcare systems is essential for ensuring the continuity of HIV/AIDS services amidst climate variability. This includes investments in healthcare infrastructure, equipment, and human resources to enhance service delivery, capacity, and quality of care. Improving healthcare governance, management, and financing mechanisms is critical for building resilient health systems that can effectively respond to the evolving challenges posed by climate variability and HIV/AIDS. Building climate-resilient healthcare facilities is crucial to ensure the continuity of HIV/AIDS services during extreme weather events and other climate-related emergencies. Retrofitting existing healthcare facilities to withstand climate-related hazards, such as floods, storms, and heatwaves, can minimize disruptions in service delivery and protect healthcare workers and patients. Incorporating climate resilience considerations into the design, construction, and operation of new healthcare facilities can enhance their ability to withstand future climate impacts.<sup>121-130</sup>

Integrating HIV/AIDS and climate change adaptation strategies is essential for maximizing synergies and leveraging resources to address common challenges. This involves mainstreaming climate change considerations into HIV/AIDS programming and vice versa. For example, incorporating climate risk assessments into HIV service planning and delivery can help identify vulnerable populations and prioritize adaptation measures. Similarly, integrating HIV/AIDS services into broader climate change adaptation initiatives, such as community resilience-building programs, can enhance the effectiveness and sustainability of both interventions. Telemedicine and digital health solutions offer innovative approaches to overcome barriers to healthcare access and delivery in the context of climate variability. Leveraging mobile technology, telemedicine platforms, and digital health tools can facilitate remote consultations, medication adherence support, and health education for HIV/AIDS patients, particularly in remote and hard-to-reach areas. These technologies can also enhance healthcare system efficiency, improve data collection and surveillance, and support decision-making in HIV/AIDS programming and climate adaptation efforts. Strengthening community health systems is essential for delivering HIV/AIDS services and supporting community-based adaptation to climate variability. This involves empowering community health workers, engaging communities in healthcare planning and decision-making,

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and promoting local ownership of healthcare initiatives. Strengthening community health systems can enhance resilience, improve health outcomes, and promote sustainability in the face of climate variability and HIV/AIDS.<sup>131-140</sup>

### **Policy Implications and Future Directions**

Policy implications and future directions at the intersection of climate variability and HIV/AIDS are critical for addressing the complex challenges posed by these interconnected phenomena. Effective policies can help mitigate the impact of climate variability on HIV transmission, improve access to treatment and care, and promote health equity within communities. Policymakers should adopt integrated policy approaches that address both climate variability and HIV/AIDS comprehensively. This includes mainstreaming climate change considerations into HIV/AIDS policies and programs and vice versa. Integrated approaches can leverage synergies, optimize resource allocation, and enhance the effectiveness of interventions aimed at reducing vulnerability to both climate variability and HIV/AIDS. Strengthening healthcare systems is essential for ensuring the continuity of HIV/AIDS services amidst climate variability. Policymakers should prioritize investments in healthcare infrastructure, equipment, and human resources to enhance service delivery, capacity, and quality of care. Improving healthcare governance, management, and financing mechanisms is critical for building resilient health systems that can effectively respond to the evolving challenges posed by climate variability and HIV/AIDS. Policymakers should prioritize adaptation and resilience-building initiatives aimed at reducing vulnerability to climate variability and HIV/AIDS within communities. This includes investing in climate-resilient infrastructure, promoting sustainable land-use practices, and strengthening social protection mechanisms to enhance community resilience. Additionally, promoting adaptive livelihood strategies, such as climate-smart agriculture and alternative income-generating activities, can help communities cope with the impacts of climate variability and reduce their susceptibility to HIV/AIDS.

Mainstreaming gender equality and social inclusion considerations is essential for addressing the differential impacts of climate variability and HIV/AIDS on marginalized populations, including women, children, and LGBTQ+ individuals. Policymakers should prioritize gender-responsive policies and programs that address the specific vulnerabilities of these populations, including access to healthcare services, education, and economic opportunities. Promoting women's empowerment, gender equality, and social inclusion can enhance resilience, reduce vulnerability, and improve health outcomes in the face of climate variability and HIV/AIDS. Continued research and innovation are essential for advancing knowledge and developing evidence-based strategies to address the complex challenges posed by climate variability and HIV/AIDS. Policymakers should support interdisciplinary research initiatives that explore the underlying drivers of vulnerability, identify effective adaptation strategies, and evaluate the impact of policy interventions. Investing in research and innovation can inform policy and practice and facilitate the development of scalable solutions to address both climate variability and HIV/AIDS. International cooperation and partnerships are essential for addressing the global challenges of climate variability and HIV/AIDS. Policymakers should prioritize multilateral collaboration, knowledge-sharing, and capacity-building initiatives to support countries in implementing

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climate-resilient HIV/AIDS programs and strengthening health systems. International cooperation can facilitate the mobilization of resources, transfer of technology, and exchange of best practices to enhance resilience and promote sustainable development outcomes worldwide.<sup>141-153</sup>

## Conclusion

The intersection of climate variability and HIV/AIDS presents complex challenges that require comprehensive and integrated approaches to address. Throughout this review, we have explored the intricate relationship between environmental changes, socio-economic vulnerabilities, and the spread of HIV/AIDS, highlighting the implications for control measures, adaptation strategies, and policy responses. It is evident that climate variability influences HIV transmission dynamics through direct and indirect pathways, impacting vulnerability, access to healthcare, and resilience within communities. Extreme weather events, changes in temperature and precipitation patterns, and environmental degradation exacerbate socio-economic disparities and increase the risk of HIV/AIDS transmission, particularly among marginalized populations.

## References

1. McMichael AJ. Planetary overload: global environmental change and the health of the human species. Cambridge University Press; 1993.
2. Reser JP, Swim JK. Adapting to and coping with the threat and impacts of climate change. *American Psychologist*. 2011;66(4):277.
3. Irwin AC, Millen JV, Fallows D. Global AIDS: myths and facts: tools for fighting the AIDS pandemic. South End Press; 2003.
4. Snowden FM. Emerging and reemerging diseases: a historical perspective. *Immunological reviews*. 2008;225(1):9-26.
5. Russell BS, Eaton LA, Petersen-Williams P. Intersecting epidemics among pregnant women: alcohol use, interpersonal violence, and HIV infection in South Africa. *Current HIV/AIDS Reports*. 2013; 10:103-110.
6. Obeagu EI, Okwuanaso CB, Edoho SH, Obeagu GU. Under-nutrition among HIV-exposed Uninfected Children: A Review of African Perspective. *Madonna University journal of Medicine and Health Sciences*. 2022;2(3):120-127.
7. Obeagu EI. A Review of Challenges and Coping Strategies Faced by HIV/AIDS Discordant Couples. *Madonna University journal of Medicine and Health Sciences*. 2023 ;3(1):7-12.  
<https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/91>.
8. Obeagu EI, Obeagu GU. An update on premalignant cervical lesions and cervical cancer screening services among HIV positive women. *J Pub Health Nutri*. 2023; 6 (2). 2023; 141:1-2. [links/63e538ed64252375639dd0df/An-update-on-premalignant-cervical-lesions-and-cervical-cancer-screening-services-among-HIV-positive-women.pdf](https://doi.org/10.2196/links/63e538ed64252375639dd0df/An-update-on-premalignant-cervical-lesions-and-cervical-cancer-screening-services-among-HIV-positive-women.pdf).
9. Ezeoru VC, Enweani IB, Ochiabuto O, Nwachukwu AC, Ogbonna US, Obeagu EI. Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International*. 2021;33(4):10-19.

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

10. Omo-Emmanuel UK, Chinedum OK, Obeagu EI. Evaluation of laboratory logistics management information system in HIV/AIDS comprehensive health facilities in Bayelsa State, Nigeria. *Int J Curr Res Med Sci.* 2017;3(1): 21-38.DOI: [10.22192/ijcrms.2017.03.01.004](https://doi.org/10.22192/ijcrms.2017.03.01.004)
11. Obeagu EI, Obeagu GU. An update on survival of people living with HIV in Nigeria. *J Pub Health Nutri.* 2022; 5 (6). 2022;129. [links/645b4bfcf3512f1cc5885784/An-update-on-survival-of-people-living-with-HIV-in-Nigeria.pdf](https://doi.org/10.22192/ijcrms.2017.03.01.004).
12. Offie DC, Obeagu EI, Akueshi C, Njab JE, Ekanem EE, Dike PN, Oguh DN. Facilitators and barriers to retention in HIV care among HIV infected MSM attending Community Health Center Yaba, Lagos Nigeria. *Journal of Pharmaceutical Research International.* 2021;33(52B):10-19.
13. Obeagu EI, Ogbonna US, Nwachukwu AC, Ochiabuto O, Enweani IB, Ezeoru VC. Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International.* 2021;33(4):10-19.
14. Odo M, Ochei KC, Obeagu EI, Barinaadaa A, Eteng UE, Ikpeme M, Bassey JO, Paul AO. TB Infection Control in TB/HIV Settings in Cross River State, Nigeria: Policy Vs Practice. *Journal of Pharmaceutical Research International.* 2020;32(22):101-119.
15. Obeagu EI, Eze VU, Alaebob EA, Ochei KC. Determination of haematocrit level and iron profile study among persons living with HIV in Umuahia, Abia State, Nigeria. *J BioInnovation.* 2016; 5:464-471. [links/592bb4990f7e9b9979a975cf/DETERMINATION-OF-HAEMATOCRIT-LEVEL-AND-IRON-PROFILE-STUDY-AMONG-PERSONS-LIVING-WITH-HIV-IN-UMUAHIA-ABIA-STATE-NIGERIA.pdf](https://doi.org/10.22192/ijcrms.2017.03.01.004).
16. Ifeanyi OE, Obeagu GU. The values of prothrombin time among HIV positive patients in FMC owerri. *International Journal of Current Microbiology and Applied Sciences.* 2015;4(4):911-916.  
[https://www.academia.edu/download/38320140/Obeagu\\_Emanuel\\_Ifeanyi\\_and\\_Obeagu\\_Getrude\\_Uzoma2.EMMA1.pdf](https://www.academia.edu/download/38320140/Obeagu_Emanuel_Ifeanyi_and_Obeagu_Getrude_Uzoma2.EMMA1.pdf).
17. Izuchukwu IF, Ozims SJ, Agu GC, Obeagu EI, Onu I, Amah H, Nwosu DC, Nwanjo HU, Edward A, Arunsi MO. Knowledge of preventive measures and management of HIV/AIDS victims among parents in Umuna Orlu community of Imo state Nigeria. *Int. J. Adv. Res. Biol. Sci.* 2016;3(10): 55-65.DOI; [10.22192/ijarbs.2016.03.10.009](https://doi.org/10.22192/ijarbs.2016.03.10.009)
18. Chinedu K, Takim AE, Obeagu EI, Chinazor UD, Eloghosa O, Ojong OE, Odunze U. HIV and TB co-infection among patients who used Directly Observed Treatment Short-course centres in Yenagoa, Nigeria. *IOSR J Pharm Biol Sci.* 2017;12(4):70-75. [links/5988ab6d0f7e9b6c8539f73d/HIV-and-TB-co-infection-among-patients-who-used-Directly-Observed-Treatment-Short-course-centres-in-Yenagoa-Nigeria.pdf](https://doi.org/10.22192/ijarbs.2016.03.10.009)
19. Oloro OH, Oke TO, Obeagu EI. Evaluation of Coagulation Profile Patients with Pulmonary Tuberculosis and Human Immunodeficiency Virus in Owo, Ondo State, Nigeria. *Madonna University journal of Medicine and Health Sciences.* 2022;2(3):110-119.
20. Nwosu DC, Obeagu EI, Nkwocha BC, Nwanna CA, Nwanjo HU, Amadike JN, Elendu HN, Ofoedeme CN, Ozims SJ, Nwankpa P. Change in Lipid Peroxidation Marker (MDA) and Non enzymatic Antioxidants (VIT C & E) in HIV Seropositive Children in an Urban Community of Abia State. Nigeria. *J. Bio. Innov.* 2016;5(1):24-30. [links/5ae735e9a6fdcc5b33eb8d6a/CHANGE-IN-LIPID-PEROXIDATION-MARKER-](https://doi.org/10.22192/ijarbs.2016.03.10.009)

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MDAAND-NON-ENZYMATIC-ANTIOXIDANTS-VIT-C-E-IN-HIV-SEROPOSITIVE-CHILDREN-IN-AN-URBAN-COMMUNITY-OF-ABIA-STATE-NIGERIA.pdf.

21. Ifeanyi OE, Obeagu GU, Ijeoma FO, Chioma UI. The values of activated partial thromboplastin time (APTT) among HIV positive patients in FMC Owerri. Int J Curr Res Aca Rev. 2015; 3:139-144.  
[https://www.academia.edu/download/38320159/Obeagu\\_Emanuel\\_Ifeanyi3\\_et\\_al.IJC\\_RAR.pdf](https://www.academia.edu/download/38320159/Obeagu_Emanuel_Ifeanyi3_et_al.IJC_RAR.pdf).
22. Obiomah CF, Obeagu EI, Ochei KC, Swem CA, Amachukwu BO. Hematological indices o HIV seropositive subjects in Nnamdi Azikiwe University teaching hospital (NAUTH), Nnewi. Ann Clin Lab Res. 2018;6(1):1-4.  
<links/5aa2bb17a6fdccd544b7526e/Haematological-Indices-of-HIV-Seropositive-Subjects-at-Nnamdi-Azikiwe.pdf>
23. Omo-Emmanuel UK, Ochei KC, Osuala EO, Obeagu EI, Onwuasoanya UF. Impact of prevention of mother to child transmission (PMTCT) of HIV on positivity rate in Kafanchan, Nigeria. Int. J. Curr. Res. Med. Sci. 2017;3(2): 28-34.DOI: 10.22192/ijcrms.2017.03.02.005
24. Aizaz M, Abbas FA, Abbas A, Tabassum S, Obeagu EI. Alarming rise in HIV cases in Pakistan: Challenges and future recommendations at hand. Health Science Reports. 2023;6(8):e1450.
25. Obeagu EI, Amekpor F, Scott GY. An update of human immunodeficiency virus infection: Bleeding disorders. J Pub Health Nutri. 2023; 6 (1). 2023;139.  
<links/645b4a6c2edb8e5f094d9bd9/An-update-of-human-immunodeficiency-virus-infection-Bleeding.pdf>.
26. Obeagu EI, Scott GY, Amekpor F, Ofodile AC, Edoho SH, Ahamefula C. Prevention of New Cases of Human Immunodeficiency Virus: Pragmatic Approaches of Saving Life in Developing Countries. Madonna University journal of Medicine and Health Sciences. 2022;2(3):128-134.  
<https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/86>.
27. Walter O, Anaebio QB, Obeagu EI, Okoroiwu IL. Evaluation of Activated Partial Thromboplastin Time and Prothrombin Time in HIV and TB Patients in Owerri Metropolis. Journal of Pharmaceutical Research International. 2022;29-34.
28. Odo M, Ochei KC, Obeagu EI, Barinaadaa A, Eteng EU, Ikpeme M, Bassey JO, Paul AO. 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. 2020;32(24):9-18.
29. Jakheng SP, Obeagu EI. Seroprevalence of human immunodeficiency virus based on demographic and risk factors among pregnant women attending clinics in Zaria Metropolis, Nigeria. J Pub Health Nutri. 2022; 5 (8). 2022;137.  
<links/6317a6b1acd814437f0ad268/Seroprevalence-of-human-immunodeficiency-virus-based-on-demographic-and-risk-factors-among-pregnant-women-attending-clinics-in-Zaria-Metropolis-Nigeria.pdf>.
30. Obeagu EI, Obeagu GU. A Review of knowledge, attitudes and socio-demographic factors associated with non-adherence to antiretroviral therapy among people living with

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. Elite Journal of Public Health, 2024; 2 (4): 111-127



- HIV/AIDS. Int. J. Adv. Res. Biol. Sci. 2023;10(9):135-142.DOI: 10.22192/ijarbs.2023.10.09.015 [links/6516faa61e2386049de5e828/A-Review-of-knowledge-attitudes-and-socio-demographic-factors-associated-with-non-adherence-to-antiretroviral-therapy-among-people-living-with-HIV-AIDS.pdf](https://doi.org/10.22192/ijarbs.2023.10.09.015)
31. Obeagu EI, Onuoha EC. Tuberculosis among HIV Patients: A review of Prevalence and Associated Factors. Int. J. Adv. Res. Biol. Sci. 2023;10(9):128-134.DOI: 10.22192/ijarbs.2023.10.09.014 [links/6516f938b0df2f20a2f8b0e0/Tuberculosis-among-HIV-Patients-A-review-of-Prevalence-and-Associated-Factors.pdf](https://doi.org/10.22192/ijarbs.2023.10.09.014).
  32. Obeagu EI, Ibeh NC, Nwobodo HA, Ochei KC, Iwegbulam CP. Haematological indices of malaria patients coinfectd with HIV in Umuahia. Int. J. Curr. Res. Med. Sci. 2017;3(5):100-104.DOI: 10.22192/ijcrms.2017.03.05.014 [https://www.academia.edu/download/54317126/Haematological indices of malaria patients coinfectd with HIV.pdf](https://www.academia.edu/download/54317126/Haematological_indices_of_malaria_patients_coinfectd_with_HIV.pdf)
  33. Jakheng SP, Obeagu EI, Abdullahi IO, Jakheng EW, Chukwueze CM, Eze GC, Essien UC, Madekwe CC, Madekwe CC, Vidya S, Kumar S. 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. 2022;13(2):26-31.
  34. Okorie HM, Obeagu Emmanuel I, Okpoli Henry CH, Chukwu Stella N. Comparative study of enzyme linked immunosorbent assay (Elisa) and rapid test screening methods on HIV, Hbsag, Hcv and Syphilis among voluntary donors in. Owerri, Nigeria. J Clin Commun Med. 2020;2(3):180-183.DOI: DOI: 10.32474/JCCM.2020.02.000137 [links/5f344530458515b7291bd95f/Comparative-Study-of-Enzyme-Linked-Immunosorbent-Assay-ELISA-and-Rapid-Test-Screening-Methods-on-HIV-HBsAg-HCV-and-Syphilis-among-Voluntary-Donors-in-Owerri-Nigeria.pdf](https://doi.org/10.32474/JCCM.2020.02.000137).
  35. Ezugwu UM, Onyenekwe CC, Ukibe NR, Ahaneku JE, Onah CE, Obeagu EI, Emeje PI, Awalu JC, Igbokwe GE. Use of ATP, GTP, ADP and AMP as an Index of Energy Utilization and Storage in HIV Infected Individuals at NAUTH, Nigeria: A Longitudinal, Prospective, Case-Controlled Study. Journal of Pharmaceutical Research International. 2021;33(47A):78-84.
  36. Emannuel G, Martin O, Peter OS, Obeagu EI, Daniel K. Factors Influencing Early Neonatal Adverse Outcomes among Women with HIV with Post Dated Pregnancies Delivering at Kampala International University Teaching Hospital, Uganda. Asian Journal of Pregnancy and Childbirth. 2023 Jul 29;6(1):203-211. <http://research.sdpublishers.net/id/eprint/2819/>.
  37. Vincent CC, Obeagu EI, Agu IS, Ukeagu NC, Onyekachi-Chigbu AC. Adherence to Antiretroviral Therapy among HIV/AIDS in Federal Medical Centre, Owerri. Journal of Pharmaceutical Research International. 2021;33(57A):360-368.
  38. Madekwe CC, Madekwe CC, Obeagu EI. Inequality of monitoring in Human Immunodeficiency Virus, Tuberculosis and Malaria: A Review. Madonna University journal of Medicine and Health Sciences. 2022;2(3):6-15. <https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/69>
  39. Echendu GE, Vincent CC, Ibebuike J, Asodike M, Naze N, Chinedu EP, Ohale B, Obeagu EI. WEIGHTS OF INFANTS BORN TO HIV INFECTED MOTHERS: A

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. Elite Journal of Public Health, 2024; 2 (4): 111-127

- PROSPECTIVE COHORT STUDY IN FEDERAL MEDICAL CENTRE, OWERRI, IMO STATE. *European Journal of Pharmaceutical and Medical Research*, 2023; 10(8): 564-568
40. Nwosu DC, Nwanjo HU, Okolie NJ, Ikeh K, Ajero CM, Dike J, Ojiegbe GC, Oze GO, Obeagu EI, Nnatananya I, Azuonwu O. BIOCHEMICAL ALTERATIONS IN ADULT HIV PATIENTS ON ANTIRETROVIRAL THERAPY. *World Journal of Pharmacy and Pharmaceutical Sciences*, 2015; 4(3): 153-160.  
[links/5a4fd0500f7e9bbc10526b38/BIOCHEMICAL-ALTERATIONS-IN-ADULT-HIV-PATIENTS-ON-ANTIRETROVIRAL-THERAPY.pdf](https://www.researchgate.net/publication/328111111_BIOCHEMICAL ALTERATIONS IN ADULT HIV PATIENTS ON ANTIRETROVIRAL THERAPY).
41. Obeagu EI, Obeagu GU. Effect of CD4 Counts on Coagulation Parameters among HIV Positive Patients in Federal Medical Centre, Owerri, Nigeria. *Int. J. Curr. Res. Biosci. Plant Biol.* 2015;2(4):45-49.
42. Obeagu EI, Nwosu DC. Adverse drug reactions in HIV/AIDS patients on highly active antiretro viral therapy: a review of prevalence. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2019;6(12):45-8.DOI: 10.22192/ijcrps.2019.06.12.004  
[links/650aba1582f01628f0335795/Adverse-drug-reactions-in-HIV-AIDS-patients-on-highly-active-antiretro-viral-therapy-a-review-of-prevalence.pdf](https://www.researchgate.net/publication/350111111_Adverse-drug-reactions-in-HIV-AIDS-patients-on-highly-active-antiretro-viral-therapy-a-review-of-prevalence).
43. Obeagu EI, Scott GY, Amekpor F, Obeagu GU. Implications of CD4/CD8 ratios in Human Immunodeficiency Virus infections. *Int. J. Curr. Res. Med. Sci.* 2023;9(2):6-13.DOI: 10.22192/ijcrms.2023.09.02.002 [links/645a4a462edb8e5f094ad37c/Implications-of-CD4-CD8-ratios-in-Human-Immunodeficiency-Virus-infections.pdf](https://www.researchgate.net/publication/365111111_Implications-of-CD4-CD8-ratios-in-Human-Immunodeficiency-Virus-infections).
44. Obeagu EI, Ochei KC, Okeke EI, Anode AC. Assessment of the level of haemoglobin and erythropoietin in persons living with HIV in Umuahia. *Int. J. Curr. Res. Med. Sci.* 2016;2(4):29-33. [links/5711c47508aeebe07c02496b/Assessment-of-the-level-of-haemoglobin-and-erythropoietin-in-persons-living-with-HIV-in-Umuahia.pdf](https://www.researchgate.net/publication/311111111_Assessment-of-the-level-of-haemoglobin-and-erythropoietin-in-persons-living-with-HIV-in-Umuahia).
45. Ifeanyi OE, Obeagu GU. The Values of CD4 Count, among HIV Positive Patients in FMC Owerri. *Int. J. Curr. Microbiol. App. Sci.* 2015;4(4):906-910.  
[https://www.academia.edu/download/38320134/Obeagu Emmanuel Ifeanyi and Obeagu Getrude Uzoma.EMMA2.pdf](https://www.academia.edu/download/38320134/Obeagu_Emanuel_Ifeanyi_and_Obeagu_Getrude_Uzoma.EMMA2.pdf).
46. Obeagu EI, Okeke EI, Anonde Andrew C. Evaluation of haemoglobin and iron profile study among persons living with HIV in Umuahia, Abia state, Nigeria. *Int. J. Curr. Res. Biol. Med.* 2016;1(2):1-5.
47. Ibebuikwe JE, Nwokike GI, Nwosu DC, Obeagu EI. A Retrospective Study on Human Immune Deficiency Virus among Pregnant Women Attending Antenatal Clinic in Imo State University Teaching Hospital. *International Journal of Medical Science and Dental Research*, 2018; 1 (2):08-14.  
<https://www.ijmsdr.org/published%20paper/li1i2/A%20Retrospective%20Study%20on%20Human%20Immune%20Deficiency%20Virus%20among%20Pregnant%20Women%20Attending%20Antenatal%20Clinic%20in%20Imo%20State%20University%20Teaching%20Hospital.pdf>.
48. Obeagu EI, Obarezi TN, Omeh YN, Okoro NK, Eze OB. Assessment of some haematological and biochemical parameters in HIV patients before receiving treatment in Aba, Abia State, Nigeria. *Res J Pharma Biol Chem Sci.* 2014; 5:825-830.
49. Obeagu EI, Obarezi TN, Ogbuabor BN, Anaebio QB, Eze GC. Pattern of total white blood cell and differential count values in HIV positive patients receiving treatment in Federal

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

- Teaching Hospital Abakaliki, Ebonyi State, Nigeria. *International Journal of Life Science, Biotechnology and Pharama Research*. 2014; 391:186-189.
50. Obeagu EI. A Review of Challenges and Coping Strategies Faced by HIV/AIDS Discordant Couples. *Madonna University journal of Medicine and Health Sciences*. 2023; 3 (1): 7-12.
  51. Oloro OH, Obeagu EI. A Systematic Review on Some Coagulation Profile in HIV Infection. *International Journal of Innovative and Applied Research*. 2022;10(5):1-11.
  52. Arthur RF, Gurley ES, Salje H, Bloomfield LS, Jones JH. Contact structure, mobility, environmental impact and behaviour: the importance of social forces to infectious disease dynamics and disease ecology. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 2017;372(1719):20160454.
  53. Oramasionwu CU, Daniels KR, Labreche MJ, Frei CR. The environmental and social influences of HIV/AIDS in sub-Saharan Africa: a focus on rural communities. *International journal of environmental research and public health*. 2011;8(7):2967-2979.
  54. Nwosu DC, Obeagu EI, Nkwuocha BC, Nwanna CA, Nwanjo HU, Amadike JN, Ezemma MC, Okpomeshine EA, Ozims SJ, Agu GC. Alterations in superoxide dismutase, vitamins C and E in HIV infected children in Umuahia, Abia state. *International Journal of Advanced Research in Biological Sciences*. 2015;2(11):268-271.
  55. Ifeanyi OE, Uzoma OG, Stella EI, Chinedum OK, Abum SC. Vitamin D and insulin resistance in HIV sero positive individuals in Umudike. *Int. J. Curr. Res. Med. Sci*. 2018;4(2):104-108.
  56. Ifeanyi OE, Leticia OI, Nwosu D, Chinedum OK. A Review on blood borne viral infections: universal precautions. *Int. J. Adv. Res. Biol. Sci*. 2018;5(6):60-66.
  57. Nwovu AI, Ifeanyi OE, Uzoma OG, Nwebonyi NS. Occurrence of Some Blood Borne Viral Infection and Adherence to Universal Precautions among Laboratory Staff in Federal Teaching Hospital Abakaliki Ebonyi State. *Arch Blood Transfus Disord*. 2018;1(2).
  58. Chinedu K, Takim AE, Obeagu EI, Chinazor UD, Eloghosa O, Ojong OE, Odunze U. HIV and TB co-infection among patients who used Directly Observed Treatment Short-course centres in Yenagoa, Nigeria. *IOSR J Pharm Biol Sci*. 2017;12(4):70-75.
  59. Offie DC, Obeagu EI, Akueshi C, Njab JE, Ekanem EE, Dike PN, Oguh DN. Facilitators and barriers to retention in HIV care among HIV infected MSM attending Community Health Center Yaba, Lagos Nigeria. *Journal of Pharmaceutical Research International*. 2021;33(52B):10-19.
  60. Obeagu EI, Obeagu GU, Ede MO, Odo EO, Buhari HA. Translation of HIV/AIDS knowledge into behavior change among secondary school adolescents in Uganda: A review. *Medicine (Baltimore)*. 2023;102(49): e36599. doi: 10.1097/MD.00000000000036599. PMID: 38065920; PMCID: PMC10713174.
  61. Anyiam AF, Arinze-Anyiam OC, Ironi EA, Obeagu EI. Distribution of ABO and rhesus blood grouping with HIV infection among blood donors in Ekiti State Nigeria. *Medicine (Baltimore)*. 2023;102(47): e36342. doi: 10.1097/MD.00000000000036342. PMID: 38013335; PMCID: PMC10681551.
  62. Echefu SN, Udosen JE, Akwiwu EC, Akpotuzor JO, Obeagu EI. Effect of Dolutegravir regimen against other regimens on some hematological parameters, CD4 count and viral load of people living with HIV infection in South Eastern Nigeria. *Medicine (Baltimore)*.

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

- 2023;102(47): e35910. doi: 10.1097/MD.00000000000035910. PMID: 38013350; PMCID: PMC10681510.
63. Opeyemi AA, Obeagu EI. Regulations of malaria in children with human immunodeficiency virus infection: A review. *Medicine (Baltimore)*. 2023;102(46): e36166. doi: 10.1097/MD.00000000000036166. PMID: 37986340; PMCID: PMC10659731.
  64. Obeagu EI, Obeagu GU, Obiezu J, Ezeonwumelu C, Ogunnaya FU, Ngwoke AO, Emeka-Obi OR,
  65. Obeagu EI, Ubosi NI, Uzoma G. Storms and Struggles: Managing HIV Amid Natural Disasters. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2023;10(11):14-25.
  66. Obeagu EI, Obeagu GU. Human Immunodeficiency Virus and tuberculosis infection: A review of prevalence of associated factors. *Int. J. Adv. Multidiscip. Res.* 2023;10(10):56-62.
  67. Obeagu EI, Obeagu GU. Unmasking the Truth: Addressing Stigma in the Fight Against HIV. *Elite Journal of Public Health*. 2024;2(1):8-22.
  68. Obeagu EI, Obeagu GU, Okwuanaso CB. Optimizing Immune Health in HIV Patients through Nutrition: A Review. *Elite Journal of Immunology*. 2024;2(1):14-33.
  69. Obeagu EI, Obeagu GU. Utilization of immunological ratios in HIV: Implications for monitoring and therapeutic strategies. *Medicine*. 2024;103(9): e37354.
  70. Obeagu EI, Obeagu GU. CD8 Dynamics in HIV Infection: A Synoptic Review. *Elite Journal of Immunology*. 2024;2(1):1-3.
  71. Obeagu EI, Obeagu GU. Implications of B Lymphocyte Dysfunction in HIV/AIDS. *Elite Journal of Immunology*. 2024;2(1):34-46.
  72. Obeagu EI, Obeagu GU. Maternal Influence on Infant Immunological Responses to HIV: A Review. *Elite Journal of Laboratory Medicine*. 2024;2(1):46-58.
  73. Obeagu EI, Obeagu GU. Understanding B Lymphocyte Functions in HIV Infection: Implications for Immune Dysfunction and Therapeutic Strategies. *Elite Journal of Medicine*. 2024;2(1):35-46.
  74. Obeagu EI, Obeagu GU. Platelet-Driven Modulation of HIV: Unraveling Interactions and Implications. *Journal home page: <http://www.journalijar.com>*;12(01).
  75. Obeagu EI, Anyiam AF, Obeagu GU. Managing Hematological Complications in HIV: Erythropoietin Considerations. *Elite Journal of HIV*. 2024;2(1):65-78.
  76. Obeagu EI, Obeagu GU, Hauwa BA, Umar AI. Hematocrit Variations in HIV Patients Co-infected with Malaria: A Comprehensive Review. *Journal home page: <http://www.journalijar.com>*;12(01).
  77. Obeagu EI, Obeagu GU. Synergistic Effects of Blood Transfusion and HIV in Children Under 5 Years with Severe Malaria: A Review. *Elite Journal of HIV*. 2024;2(1):31-50.
  78. Obeagu EI, Anyiam AF, Obeagu GU. Unveiling B Cell Mediated Immunity in HIV Infection: Insights, Challenges, and Potential Therapeutic Avenues. *Elite Journal of HIV*. 2024;2(1):1-5.
  79. Obeagu EI, Obeagu GU. Hematocrit Fluctuations in HIV Patients Co-infected with Malaria Parasites: A Comprehensive Review. *Int. J. Curr. Res. Med. Sci.* 2024;10(1):25-36.
  80. Obeagu EI, Obeagu GU. Transfusion Therapy in HIV: Risk Mitigation and Benefits for Improved Patient Outcomes. *Sciences*. 2024;4(1):32-7.

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

81. Obeagu EI, Obeagu GU. Mental Health and Psychosocial Effects of natural disaster on HIV Patients. *Sciences*. 2024;4(1):38-44.
82. Obeagu EI, Obeagu GU. Eosinophil-Associated Changes in Neonatal Thymic T Regulatory Cell Populations in HIV-Infected Pregnancies. *Elite Journal of Health Science*. 2024;2(1):33-42.
83. Obeagu EI, Obeagu GU. Advances in Understanding the Impact of Blood Transfusion on Anemia Resolution in HIV-Positive Children with Severe Malaria: A Comprehensive Review. *Elite Journal of Haematology*. 2024;2(1):26-41.
84. Obeagu EI, Ayogu EE, Obeagu GU. Interactions between Blood Transfusion and Antiretroviral Medications: Implications for Patient Care. *Elite Journal of Medicine*. 2024;2(2):104-15.
85. Obeagu EI, Obeagu GU. Maternal Eosinophilic Responses in HIV-Positive Pregnant Women: Unraveling Immunological Dynamics for Improved Maternal-Fetal Health. *Elite Journal of Immunology*. 2024;2(1):47-64.
86. Obeagu EI, Anyanwu CN, Obeagu GU. Challenges and Considerations in Managing Blood Transfusion for Individuals with HIV. *Elite Journal of HIV*. 2024;2(2):1-7.
87. Obeagu EI, Ubosi NI, Obeagu GU, Akram M. Early Infant Diagnosis: Key to Breaking the Chain of HIV Transmission. *Elite Journal of Public Health*. 2024;2(1):52-61.
88. Obeagu EI, Obeagu GU. Understanding Hematocrit Fluctuations in HIV-Malaria Coinfection for Improved Management. *Elite Journal of Public Health*. 2024;2(1):22-34.
89. Obeagu EI, Obeagu GU. The Impact of Erythropoietin on Preeclampsia in HIV-Positive Women: A Review. *Elite Journal of Nursing and Health Science*. 2024;2(1):21-31.
90. Obeagu EI, Obeagu GU. Platelet Distribution Width (PDW) as a Prognostic Marker for Anemia Severity in HIV Patients: A Comprehensive Review. *Journal home page*: <http://www.journalijar.com>;12(01).
91. Obeagu EI, Obeagu GU. Neonatal Outcomes in Children Born to Mothers with Severe Malaria, HIV, and Transfusion History: A Review. *Elite Journal of Nursing and Health Science*. 2024;2(3):38-58.
92. Obeagu EI, Obeagu GU. Assessing Platelet Functionality in HIV Patients Receiving Antiretroviral Therapy: Implications for Risk Assessment. *Elite Journal of HIV*. 2024;2(3):14-26.
93. Obeagu EI, Obeagu GU. Advancements in HIV Prevention: Africa's Trailblazing Initiatives and Breakthroughs. *Elite Journal of Public Health*. 2024;2(1):52-63.
94. Obeagu EI, Obeagu GU. Maternal Influence on Infant Immunological Responses to HIV: A Review. *Elite Journal of Laboratory Medicine*. 2024;2(1):46-58.
95. Obeagu EI, Obeagu GU. Counting Cells, Shaping Fates: CD4/CD8 Ratios in HIV. *Elite Journal of Scientific Research and Review*. 2024;2(1):37-50.
96. Obeagu EI, Anyiam AF, Obeagu GU. Managing Hematological Complications in HIV: Erythropoietin Considerations. *Elite Journal of HIV*. 2024;2(1):65-78.
97. Obeagu EI, Obeagu GU. Immune Modulation in HIV-Positive Neonates: Insights and Implications for Clinical Management. *Elite Journal of Nursing and Health Science*. 2024;2(3):59-72.



98. Obeagu EI, Ayogu EE, Obeagu GU. Impact on Viral Load Dynamics: Understanding the Interplay between Blood Transfusion and Antiretroviral Therapy in HIV Management. *Elite Journal of Nursing and Health Science*. 2024;2(2):5-15.
99. Obeagu EI, Obeagu GU. Understanding B Lymphocyte Functions in HIV Infection: Implications for Immune Dysfunction and Therapeutic Strategies. *Elite Journal of Medicine*. 2024;2(1):35-46.
100. Obeagu EI, Anyanwu CN, Obeagu GU. Challenges and Considerations in Managing Blood Transfusion for Individuals with HIV. *Elite Journal of HIV*. 2024;2(2):1-7.
101. Obeagu EI, Obeagu GU. Understanding ART and Platelet Functionality: Implications for HIV Patients. *Elite Journal of HIV*. 2024;2(2):60-73.
102. Obeagu EI, Obeagu GU. The Role of Blood Transfusion Strategies in HIV Management: Current Insights and Future Directions. *Elite Journal of Medicine*. 2024;2(1):10-22.
103. Obeagu EI, Amaeze AA O, Obeagu GU. B Cell Deficiency and Implications in HIV Pathogenesis: Unraveling the Complex Interplay. *Elite Journal of Nursing and Health Science*. 2024;2(2):33-46.
104. Obeagu EI, Obeagu GU. Eosinophil Dynamics in Pregnancy among Women Living with HIV: A Comprehensive Review. *Int. J. Curr. Res. Med. Sci*. 2024;10(1):11-24.
105. Obeagu EI, Obeagu GU. Hematocrit Fluctuations in HIV Patients Co-infected with Malaria Parasites: A Comprehensive Review. *Int. J. Curr. Res. Med. Sci*. 2024;10(1):25-36.
106. Obeagu EI, Obeagu GU. Unveiling the Role of Innate Immune Activation in Pediatric HIV: A Review. *Elite Journal of Immunology*. 2024;2(3):33-44.
107. Obeagu EI, Obeagu GU. Harnessing B Cell Responses for Personalized Approaches in HIV Management. *Elite Journal of Immunology*. 2024;2(2):15-28.
108. Obeagu EI, Obeagu GU, Hauwa BA, Umar AI. Neutrophil Dynamics: Unveiling Their Role in HIV Progression within Malaria Patients. *Journal home page: <http://www.journalijar.com>;12(01)*.
109. Obeagu EI, Obeagu GU, Hauwa BA, Umar AI. Hematocrit Variations in HIV Patients Co-infected with Malaria: A Comprehensive Review. *Journal home page: <http://www.journalijar.com>;12(01)*.
110. Obeagu EI, Anyiam AF, Obeagu GU. Managing Anemia in HIV through Blood Transfusions: Clinical Considerations and Innovations. *Elite Journal of HIV*. 2024;2(1):16-30.
111. Obeagu EI, Obeagu GU. Maternal Eosinophilic Responses in HIV-Positive Pregnant Women: Unraveling Immunological Dynamics for Improved Maternal-Fetal Health. *Elite Journal of Immunology*. 2024;2(1):47-64.
112. Obeagu EI, Obeagu GU. Platelet Aberrations in HIV Patients: Assessing Impacts of ART. *Elite Journal of Haematology*, 2024; 2 (3):10-24.
113. Obeagu EI, Obeagu GU. Hematological Changes Following Blood Transfusion in Young Children with Severe Malaria and HIV: A Critical Review. *Elite Journal of Laboratory Medicine*. 2024;2(1):33-45.

114. Obeagu EI, Anyiam AF, Obeagu GU. Erythropoietin Therapy in HIV-Infected Individuals: A Critical Review. *Elite Journal of HIV*. 2024;2(1):51-64.
115. Obeagu EI, Ubosi NI, Obeagu GU, Obeagu AA. Nutritional Strategies for Enhancing Immune Resilience in HIV: A Review. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2024;11(2):41-51.
116. Obeagu EI, Obeagu GU. The Crucial Role of Erythropoietin in Managing Anemia in HIV: A Review. *Elite Journal of Scientific Research and Review*. 2024;2(1):24-36.
117. Obeagu EI, Obeagu GU. Impact of Maternal Eosinophils on Neonatal Immunity in HIV-Exposed Infants: A Review. *Elite Journal of Immunology*. 2024;2(3):1-8.
118. Obeagu EI, Anyiam AF, Obeagu GU. Unveiling B Cell Mediated Immunity in HIV Infection: Insights, Challenges, and Potential Therapeutic Avenues. *Elite Journal of HIV*. 2024;2(1):1-5.
119. Obeagu EI, Obeagu GU. Anemia and Erythropoietin: Key Players in HIV Disease Progression. *Elite Journal of Haematology*, 2024; 2 (3):42-57.
120. Obeagu EI, Obeagu GU. Platelet Dysfunction in HIV Patients: Assessing ART Risks. *Elite Journal of Scientific Research and Review*. 2024;2(1):1-6.
121. Obeagu EI, Ubosi NI, Obeagu GU, Akram M. Early Infant Diagnosis: Key to Breaking the Chain of HIV Transmission. *Elite Journal of Public Health*. 2024;2(1):52-61.
122. Obeagu EI, Obeagu GU. Transfusion Therapy in HIV: Risk Mitigation and Benefits for Improved Patient Outcomes. *Sciences*. 2024;4(1):32-7.
123. Obeagu EI, Obeagu GU. P-Selectin and Immune Activation in HIV: Clinical Implications. *Elite Journal of Health Science*. 2024;2(2):16-29.
124. Obeagu EI, Obeagu GU. Mental Health and Psychosocial Effects of natural disaster on HIV Patients. *Sciences*. 2024;4(1):38-44.
125. Obeagu EI, Obeagu GU. Optimizing Blood Transfusion Protocols for Breast Cancer Patients Living with HIV: A Comprehensive Review. *Elite Journal of Nursing and Health Science*. 2024;2(2):1-7.
126. Obeagu EI, Obeagu GU. Advances in Understanding the Impact of Blood Transfusion on Anemia Resolution in HIV-Positive Children with Severe Malaria: A Comprehensive Review. *Elite Journal of Haematology*. 2024;2(1):26-41.
127. Obeagu EI, Obeagu GU. Transfusion-Related Complications in Children Under 5 with Coexisting HIV and Severe Malaria: A Review. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2024;11(2):9-19.
128. Obeagu EI, Obeagu GU. Impact of Blood Transfusion on Viral Load Dynamics in HIV-Positive Neonates with Severe Malaria: A Review. *Elite Journal of Scientific Research and Review*. 2024;2(1):42-60.
129. Obeagu EI, Ayogu EE, Obeagu GU. Interactions between Blood Transfusion and Antiretroviral Medications: Implications for Patient Care. *Elite Journal of Medicine*. 2024;2(2):104-5.
130. Obeagu EI, Obeagu GU. P-Selectin Expression in HIV-Associated Coagulopathy: Implications for Treatment. *Elite Journal of Haematology*, 2024; 2 (3):25-41.
131. Obeagu EI, Obeagu GU. Eosinophil-Associated Changes in Neonatal Thymic T Regulatory Cell Populations in HIV-Infected Pregnancies. *Elite Journal of Health Science*. 2024;2(1):33-42.

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

132. Obeagu EI, Obeagu GU. Exploring the Role of L-selectin in HIV-related Immune Exhaustion: Insights and Therapeutic Implications. *Elite Journal of HIV*. 2024;2(2):43-59.
133. Obeagu EI. Erythropoietin and the Immune System: Relevance in HIV Management. *Elite Journal of Health Science*. 2024;2(3):23-35.
134. Obeagu EI, Obeagu GU. The Impact of Erythropoietin on Preeclampsia in HIV-Positive Women: A Review. *Elite Journal of Nursing and Health Science*. 2024;2(1):21-31.
135. Obeagu EI, Obeagu GU. Unraveling the Role of Eosinophil Extracellular Traps (EETs) in HIV-Infected Pregnant Women: A Review. *Elite Journal of Nursing and Health Science*. 2024;2(3):84-99.
136. Obeagu EI, Obeagu GU. Hematologic Considerations in Breast Cancer Patients with HIV: Insights into Blood Transfusion Strategies. *Elite Journal of Health Science*. 2024;2(2):20-35.
137. Obeagu EI, Obeagu GU. L-selectin and HIV-Induced Immune Cell Trafficking: Implications for Pathogenesis and Therapeutic Strategies. *Elite Journal of Laboratory Medicine*. 2024;2(2):30-46.
138. Obeagu EI, Obeagu GU. The Intricate Relationship Between Erythropoietin and HIV-Induced Anemia: Unraveling Pathways for Therapeutic Insights. *Int. J. Curr. Res. Chem. Pharm. Sci*. 2024;11(2):30-40.
139. Obeagu EI, Obeagu GU. The Role of L-selectin in Tuberculosis and HIV Coinfection: Implications for Disease Diagnosis and Management. *Elite Journal of Public Health*. 2024;2(1):35-51.
140. Kalu OA, Ukibe NR, Onyenekwe CC, Okoyeagu RC, Nnaemeka WS, Onyenekwe AJ, Ukibe EG, Ukibe BC, Ukibe VE, Obeagu EI. Assessment of Serum Cystatin C, Microalbumin Levels and Egfr in HIV Seropositive Individuals based on Age and Gender in NAUTH, Nnewi, Nigeria. *Elite Journal of Medicine*. 2024;2(3):48-59.
141. Obeagu EI, Obeagu GU. Understanding Immune Cell Trafficking in Tuberculosis-HIV Coinfection: The Role of L-selectin Pathways. *Elite Journal of Immunology*. 2024;2(2):43-59.
142. Obeagu EI, Obeagu GU. Eosinophilic Changes in Placental Tissues of HIV-Positive Pregnant Women: A Review. *Elite Journal of Laboratory Medicine*. 2024;2(1):14-32.
143. Obeagu EI, Obeagu GU. P-Selectin and Platelet Activation in HIV: Implications for Antiviral Therapy. *Elite Journal of Scientific Research and Review*. 2024;2(1):17-41.
144. Obeagu EI, Obeagu GU. Strength in Unity: Building Support Networks for HIV Patients in Uganda. *Elite Journal of Medicine*. 2024;2(1):1-6.
145. Obeagu EI, GU EE. Understanding the Intersection of Highly Active Antiretroviral Therapy and Platelets in HIV Patients: A Review. *Elite Journal of Haematology*, 2024; 2 (3):111-117.
146. Brault MA, Vermund SH, Aliyu MH, Omer SB, Clark D, Spiegelman D. Leveraging HIV care Infrastructures for integrated chronic disease and pandemic management in sub-Saharan Africa. *International journal of environmental research and public health*. 2021;18(20):10751.

**Citation:** Obeagu EI, Mami DM, Obeagu GU. Climate Variability and HIV: Implications for Control Measures. *Elite Journal of Public Health*, 2024; 2 (4): 111-127

147. Schwartländer B, Stover J, Hallett T, Atun R, Avila C, Gouws E, Bartos M, Ghys PD, Opuni M, Barr D, Alsallaq R. Towards an improved investment approach for an effective response to HIV/AIDS. *The Lancet*. 2011;377(9782):2031-2041.
148. Watkins-Hayes C. Intersectionality and the sociology of HIV/AIDS: Past, present, and future research directions. *Annual Review of Sociology*. 2014; 40:431-457.
149. Nyasimi M, Ayanlade A, Mungai C, Derkyi M, Jegede MO. Inclusion of gender in Africa's climate change policies and strategies. *Handbook of Climate Change Communication: Vol. 1: Theory of Climate Change Communication*. 2018:171-85.
150. Braaf R. Addressing the intersections of climate change, energy, environmental degradation and gender-based violence. Prepared for the United Nations Development Programme. Accessed on November. 2016; 12:2022.
151. Obeagu EI, Mami DM, Obeagu GU. Climate Change as a Driver of HIV Transmission Dynamics: A Review. *Elite Journal of HIV*, 2024; 2(4): 110-127
152. Obeagu EI, Mami DM, Obeagu GU. The Nexus Between Climate Change and HIV Spread: Understanding Intersections, Impacts, and Interventions. *Elite Journal of HIV*, 2024; 2(4): 128-145
153. Obeagu EI, Mami DM, Obeagu GU. Climate Change and HIV: Assessing Risks and Vulnerabilities. *Elite Journal of Public Health*, 2024; 2 (4): 94-110