Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Prevalence and individual factors associated with unsuppressed viral load among HIV patients receiving antiretroviral therapy at Ndejje Health Centre IV, Wakiso district. A cross-sectional study.

Ali Ssemanda*, Richard Miiro, Hasifa Nansereko, Francisco Ssemuwemba, Jane Frank Nalubega, Immaculate Prosperia Naggulu
Mildmay Institute of Health Sciences.

Abstract.

Background:
Unsuppressed HIV viral load remains a major public health challenge among people living with HIV receiving antiretroviral therapy (ART), particularly in low- and middle-income countries. This study assessed the prevalence and individual factors associated with unsuppressed viral load among HIV patients receiving ART at Ndejje Health Centre IV, Wakiso District.

Methodology:
A descriptive cross-sectional study was conducted among 77 HIV-positive adults aged 18 years and above who had been on ART for at least six months. Participants were selected using purposive sampling. Data were collected using semi-structured questionnaires and supplemented with clinical records for viral load results. Data were analyzed using descriptive statistics, including frequencies and percentages.

Results:
Most participants were aged 25–34 years (36.4%) and female (57.1%). The prevalence of unsuppressed viral load was 33.8% (26/77), while 66.2% (51/77) had suppressed viral loads. The majority had primary education (36.4%) and were unemployed (40.3%). Most respondents reported having family or social support for HIV treatment (66.2%), while 29.9% experienced stigma or discrimination. Individual factors, such as unemployment, lower educational level, and limited social support, were identified as potential contributors to unsuppressed viral load.

Conclusion:
The prevalence of unsuppressed viral load among patients receiving ART at Ndejje Health Centre IV was relatively high, indicating ongoing challenges in achieving optimal treatment outcomes. Socioeconomic factors, education level, and social support appear to influence viral suppression among patients on ART.

Recommendations:
Healthcare providers should strengthen adherence counseling, particularly for patients who are socioeconomically vulnerable. The Ministry of Health and partners should integrate economic empowerment programs and community support interventions to improve adherence and retention in care. Routine viral load monitoring and stigma reduction strategies should also be enhanced to improve treatment outcomes.

Keywords: *HIV/AIDS, Unsuppressed viral load, Antiretroviral therapy (ART), Ndejje Health Centre IV, Wakiso District.*
Submitted: *December 05, 2025* ***Accepted:*** *February 11, 2026* ***Published:*** *March 05, 2026*
Corresponding author: *Ali Ssemanda.*
Mildmay Institute of Health Sciences.

Background.
Human immunodeficiency virus (HIV) attacks the immune system, and AIDS occurs at the most advanced stage. Globally, 27% of PLHIV on ART have unsuppressed viral loads, especially children and adolescents. High viral load is linked to poor adherence, delayed ART initiation, and high baseline viral load. Newer regimens like dolutegravir improve suppression, but gaps in monitoring and follow-up remain (WHO, 2024). In Asia, about 62% of PLHIV on ART are suppressed, leaving 38% unsuppressed. Children and adolescents show 83–84% suppression, but limited viral load testing and delayed ART initiation reduce outcomes.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Sites without routine viral load monitoring show higher virological failure, and switching to second-line therapy is often delayed. Expansion of viral load testing and dolutegravir access is essential (Fei *et al*., 2025). In Africa overall, 23–25% of PLHIV on ART remain unsuppressed, with children and adolescents particularly affected. Delayed switching to second-line therapy and limited viral load testing are common barriers. Strengthening adherence support, viral load monitoring, and access to dolutegravir is critical to improving outcomes continent-wide (UNAIDS, 2024).

In South Africa, 76% of PLHIV achieved viral suppression in 2022, but children and adolescents lag at 66–70%. Poor adherence, high baseline viral load, and treatment interruptions contribute to non-suppression. Dolutegravir-based regimens have improved outcomes, though gaps remain in monitoring and switching to second-line therapy. Adolescent- friendly services and expanded testing are crucial (Johnson *et al*., 2021). In East Africa, suppression rates vary: Kenya 79%, Tanzania 75%, Rwanda 88%, Ethiopia 72– 74%. Children and adolescents have lower suppression (~65–70%), with challenges including poor adherence and delayed switching. Expansion of dolutegravir and viral load testing is key to achieving 95-95-95 targets (UNAIDS, 2024).

In Uganda, 82% of PLHIV achieved viral suppression in 2022, leaving 18% unsuppressed. Children and adolescents have lower rates (~65–70%) due to adherence issues and treatment delays. Dolutegravir improves outcomes, but gaps remain in monitoring, switching, and adolescent-focused care (Tumusiime *et al*., 2025). In Wakiso District, retention in care at Wakiso Health Centre IV was 62.9% pre-COVID and 71.4% during COVID at 6 months, dropping below 50% by 24 months. Mobile phone ownership and multi-month ART dispensing influenced retention. While viral load suppression was not reported, retention is a key determinant of outcomes (Akugizibwe *et al*., 2023). Ndejje Health Centre IV in Wakiso District provides ART services to children, adolescents, and adults. Reports show adherence challenges such as forgetfulness, side effects, and poor social support. Preliminary data indicate that about 20–25% of children and adolescents on ART have unsuppressed viral loads. This un-suppression aligns with national trends and may result from limited monitoring and delayed regimen switching. The lack of published data highlights the need to assess local determinants of viral non-suppression. (Magezi, 2022). This study assessed the prevalence and individual factors associated with unsuppressed viral load among HIV patients receiving ART at Ndejje Health Centre IV, Wakiso District.

Methodology.

Study Design.

The study used a descriptive cross-sectional design to collect quantitative data from participants. This design was suitable as it allowed the assessment of prevalence and individual factors associated with unsuppressed viral loads without the need for long-term follow-up.

Study Area.

The study was conducted at Ndejje Health Centre IV, located in Wakiso District, Central Region of Uganda. Ndejje Health Centre IV was a private non-profit health facility handling HIV care and treatment. The hospital served thousands of patients living with HIV annually, providing ART, viral load monitoring, counselling, and other support services. Its catchment area covered Wakiso District and the surrounding areas in Central Uganda.

Study Population.

The study population comprised patients living with HIV who were attending ART at Ndejje Health Centre IV, including both male and female adults aged 18 years and above. Participants had been on ART for at least six months and consented to participate in the study.

Sample Size Determination.

The sample size was determined using Kish and Leslie's (1956) formula: $n=(z^2pq)/d^2$

Where;

n= the desired sample size

z= standard normal deviation at 95% confidence interval (1.96).

p= estimated proportion of the population with criteria under study (28%) q= (1-p)

d= margin of error (0.10).

Substituting the values into the formula $n=(z^2pq)/d^2$

z=1.96, 0.25, q=0.72, d=0.10

$$n=\frac{(1.96)^2\times 0.28\times 0\cdot 72}{(0\cdot 10)^2}$$

n=77 patients.

Sampling Technique.

A purposive sampling technique was employed to select participants who met the inclusion criteria. This technique ensured that respondents with sufficient knowledge or experience related to ART and viral load monitoring were included.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Sampling Procedure.

The ART clinic staff at Ndejje Health Centre IV identified patients with documented viral load results. Eligible participants were approached individually, and informed consent was obtained before inclusion. A total of 77 patients were selected for the study.

Data Collection Method.

Data was collected using semi-structured questionnaires administered to participants. The questionnaire captured individual graphic factors, clinical history, ART adherence, comorbidities, and health system factors such as drug stockouts or staff support. Both self- administered and researcher-assisted approaches were used depending on participant literacy levels.

Data Collection Tools.

The study employed **questionnaires** as the primary data collection tool. These questionnaires contained both closed- and open-ended questions. This method made data collection easy, fast, and convenient for gathering data from a relatively large population within a short period, and it also simplified data analysis. The questionnaires were administered to respondents to fill out, and interviewer-guided sessions were conducted using the same tool where needed.

Additionally, **hospital records** were used as a supplementary data collection tool. These records provided accurate clinical information such as patients' viral load results, ART regimen, adherence history, and demographic details. The use of hospital records enhanced the reliability of the study by offering verified data that could be compared with self-reported information from respondents.

Data Collection Procedure.

Permission was obtained from the Ndejje Health Centre IV administration.

Participants were approached individually in the ART clinic and provided with information about the study.

Written informed consent was obtained.

Each participant was assigned a unique code to maintain confidentiality. Questionnaires were administered, with the researcher assisting illiterate participants.

Completed questionnaires were checked daily for completeness and accuracy.

Study Variables.

Independent variables

Individual graphic factors (age, sex, marital status), and adherence levels.

Dependent variable

Viral load status (high viral load vs. suppressed viral load).

Quality Control.

Pre-testing: The questionnaire was pre-tested on 10 participants at a nearby facility to ensure clarity and reliability.

Pilot Study: A pilot study was conducted at Ndejje Health Centre IV, a week before actual data collection, to identify potential challenges.

Training of Assistants: Research assistants were trained on study objectives, ethical considerations, and questionnaire administration.

Data Verification: Questionnaires were checked daily for completeness and accuracy**.**

Data Analysis and Presentation.

Data was entered into Microsoft Excel and analyzed using descriptive statistics (frequencies, percentages, mean, standard deviation). Results were presented using tables, charts, and narratives.

Ethical Consideration.

Ethical clearance was obtained from the Mildmay Institutional Review Board. Participants provided written informed consent. Confidentiality and privacy were strictly maintained, and participants had the right to withdraw at any time without consequences.

Results.

Individual Factors Associated with High HIV Viral Loads.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Table 1: shows Individual graph Factors Associated with High HIV Viral Loads (n=77)

Variables	Frequency (f)	Percentage (%)
Age (years)		
18–24	13	16.9
25–34	28	36.4
35–44	23	29.9
45 and above	13	16.9
TOTAL	77	100
Gender		
Male	33	42.9
Female	44	57.1
TOTAL	77	100
Marital Status		
Single	26	33.8
Married	36	46.8
Divorced/Separated	10	13.0
Widowed	5	6.5
TOTAL	**77**	**100**
Education Level		
No formal education	5	6.5
Variables	Frequency (f)	Percentage (%)
Primary	28	36.4
Secondary	26	33.8
Tertiary/University	18	23.4
TOTAL	77	100
Employment Status		
Employed	18	23.4
Self-employed	28	36.4
Unemployed	31	40.3
TOTAL	**77**	**100**
Family or Social Support for HIV Treatment		
Yes	51	66.2
No	26	33.8

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

TOTAL	77	100
Experienced Stigma or Discrimination Due to HIV Status		
Yes	23	29.9
No	54	70.1
TOTAL	**77**	**100**

Source:2025.

Regarding age, most respondents, 28 (36.4%), were aged 25–34 years, while the least, 13 (16.9%), were aged 18–24 years and 45 years and above.

Regarding gender, the majority, 44 (57.1%), were female, whereas the minority, 33 (42.9%), were male. In terms of marital status, most respondents, 36 (46.8%), were married, while the least were 5 (6.5%) who were widowed.

For educational attainment, most respondents, 28 (36.4%), had completed primary education, while the least, 5 (6.5%), had no formal education.

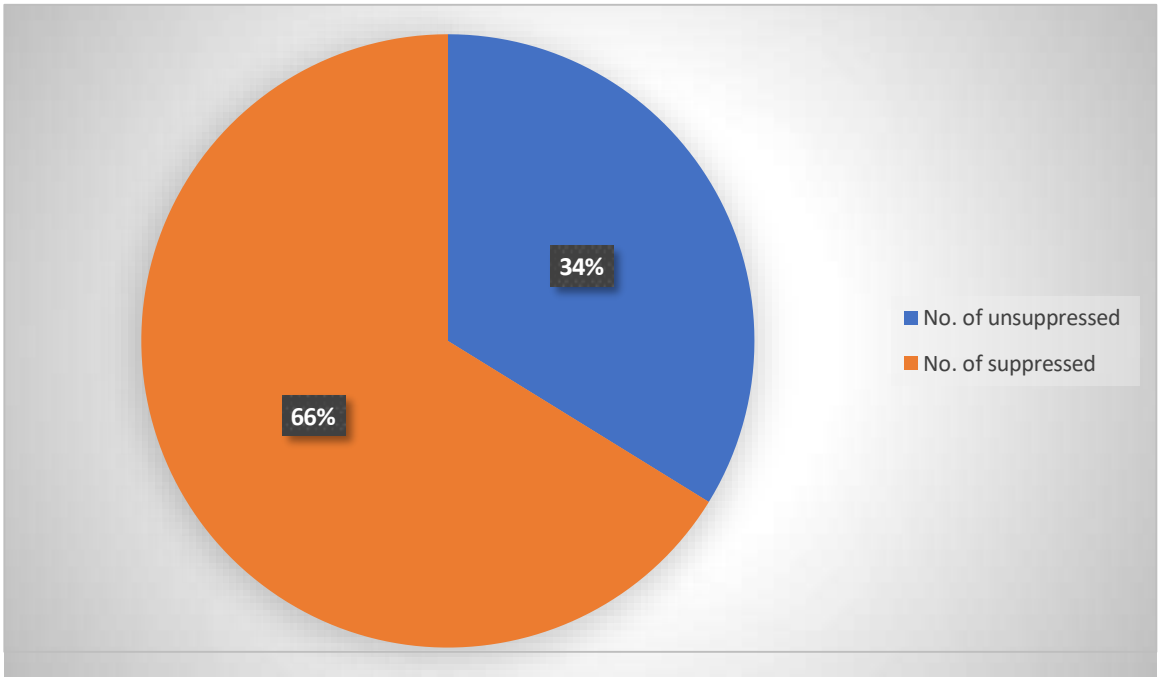
Regarding employment status, most respondents, 31 (40.3%), were unemployed, whereas the least, 18 (23.4%), were formally employed.

In terms of family or social support for HIV treatment, the majority, 51 (66.2%), reported having support, while 26 (33.8%) did not.

Regarding stigma, most respondents, 54 (70.1%), had not experienced stigma, while 23 (29.9%) had experienced discrimination.

Prevalence of unsuppressed viral load among HIV patients receiving antiretroviral therapy at Ndejje Health Centre IV.

Figure 1: Prevalence of unsuppressed viral load among HIV patients receiving antiretroviral therapy at Ndejje Health Centre IV.



Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Figure 1 shows that 26 (33.8%) HIV-positive patients receiving antiretroviral therapy had an unsuppressed viral load, while 51 (66.2%) had a suppressed viral load. This indicates that a smaller proportion of patients were not achieving viral suppression, highlighting the need for continued adherence support and monitoring to improve treatment outcomes.

Discussion of results.

The prevalence of unsuppressed viral load.

The prevalence of unsuppressed viral load in this study was 26 (33.8%), while 51 (66.2%) had suppressed viral loads. This finding is comparable to other studies conducted in Uganda and sub-Saharan Africa, where unsuppressed viral load prevalence among patients on ART ranges between 20% and 40% (Ministry of Health Uganda, 2022; UNAIDS, 2023). Although the majority achieved viral suppression, the proportion with unsuppressed viral load remains concerning and highlights the need for strengthened adherence support and monitoring interventions.

Individual Factors Associated with High HIV Viral Loads.

This study assessed individual factors associated with high HIV viral loads among patients receiving antiretroviral therapy (ART) at Ndejje Health Centre IV. The findings showed that most respondents were aged 25–34 years, 28 (36.4%), followed by those aged 35–44 years, 23 (29.9%), while the least represented age groups were 18–24 years and 45 years and above, each with 13 (16.9%). This finding is comparable to studies conducted in sub-Saharan Africa, which reported that young adults constitute the largest proportion of people living with HIV receiving ART services. Younger age groups have also been associated with a higher likelihood of unsuppressed viral load due to lifestyle factors, mobility, and adherence challenges (UNAIDS, 2023; Bulage et al., 2017).

Regarding gender, females formed the majority of respondents, 44 (57.1%), while males were 33 (42.9%). This finding is consistent with reports from Uganda and other African countries showing higher HIV service utilization among women compared to men, partly due to their interaction with healthcare services through maternal and reproductive health programs (Ministry of Health Uganda, 2022). However, previous studies have shown that men are more likely to experience poor treatment outcomes and unsuppressed viral loads due to delayed health-seeking behavior and lower adherence levels (Kipp et al., 2010).

In terms of marital status, most respondents were married 36 (46.8%), followed by single participants 26 (33.8%), divorced or separated 10 (13.0%), and widowed participants 5 (6.5%). Similar patterns have been reported in studies conducted in East Africa, where married individuals constituted a large proportion of ART clients. Marriage may provide emotional and financial support that promotes adherence to ART, although fear of disclosure to partners has also been identified as a barrier in some cases (Nasuuna et al., 2018).

For education level, most respondents had primary education 28 (36.4%), followed by secondary education 26 (33.8%), tertiary education 18 (23.4%), and no formal education 5 (6.5%). This finding is comparable with studies conducted in Uganda and Ethiopia, where the majority of ART clients had low to moderate education levels. Lower educational attainment has been associated with poor understanding of treatment adherence requirements and reduced viral suppression outcomes (Ayele et al., 2018).

Regarding employment status, the majority of respondents were unemployed, 31(40.3%), followed by self-employed individuals, 28 (36.4%), and formally employed respondents 18, 23.4%). This finding agrees with previous studies conducted in low-income settings, which showed that unemployment and poverty significantly influence ART adherence due to financial constraints such as transportation costs, food insecurity, and competing priorities (Nasuuna et al., 2018; Wringe et al., 2009).

Most respondents reported having family or social support for HIV treatment 51, 66.2%), while 26 (33.8%) had no support. Social support is widely recognized as a key determinant of treatment adherence and viral suppression. Patients with strong family or community support systems are more likely to adhere to medication schedules and clinic appointments compared to those without support (Wringe et al., 2009).

Regarding stigma and discrimination, the majority of respondents, 54 (70.1%), reported not experiencing stigma, while 23 (29.9%) reported experiencing discrimination due to their HIV status. This finding is similar to studies conducted in Uganda that reported declining stigma levels due to increased HIV awareness campaigns and normalization of HIV treatment. However, stigma remains a significant barrier to adherence and retention in care in many settings (Turan et al., 2017).

Conclusion

The study findings were generally consistent with previous research conducted in Uganda and other sub-Saharan African settings. Similar patterns were observed in terms of

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

age distribution, gender representation, socioeconomic factors, and the influence of social support on treatment outcomes. The prevalence of unsuppressed viral load was comparable to findings from other studies, although it remains a significant public health concern. Individual factors such as unemployment, lower education levels, and limited social support may contribute to poor viral suppression outcomes.

Recommendations.

Healthcare providers at Ndejje Health Centre IV and other ART clinics should intensify individualized adherence counseling, particularly targeting younger adults and socioeconomically vulnerable patients. This can be achieved through regular adherence assessment, reminder systems, peer counseling, and differentiated service delivery models to improve treatment outcomes. Conduct further analytical studies to identify predictors of unsuppressed viral load and evaluate intervention strategies.

The Ministry of Health, local government authorities, and implementing partners (NGOs and community-based organizations) should integrate economic empowerment initiatives such as income-generating activities, vocational training, and transport support programs for people living with HIV.

Healthcare workers, community health workers (VHTs), and HIV support organizations should encourage family involvement in patient care and strengthen community-based peer support groups.

The Ministry of Health, district health teams, community leaders, and media organizations should continue implementing community education campaigns aimed at reducing HIV-related stigma and discrimination.

Acknowledgements

I would like to extend my deepest gratitude to the Almighty God for His guidance, protection, and blessings throughout this research journey.

My heartfelt appreciation goes to the Mildmay Institute of Health Sciences for its unwavering support, academic guidance, and exceptional resources that greatly enriched this study. I am sincerely thankful to the institution's dedicated staff for their constant encouragement and assistance, which played a vital role in the successful completion of this research.

I am profoundly grateful to the Medical Director and the entire staff of Ndejje Health Centre IV for their invaluable cooperation and support during the data collection process. Their willingness to provide access to clinical information and patient care resources was crucial to the success of this study.

Special appreciation goes to my research supervisor, Mr. Miiro Richard, whose expert guidance, patience, and constructive feedback were instrumental throughout this research journey.

I also wish to extend my sincere thanks to my parents, Ms. Nabatanzi Hafsah and Mr. Ssemanda Ali, for their unwavering love, support, and encouragement at every stage of this process.

May God reward you all abundantly.

Abbreviations and acronyms

AIDS: Acquired Immunodeficiency Syndrome
ART: Antiretroviral Therapy
DNA: Deoxyribonucleic Acid
HIV: Human Immunodeficiency Virus
RNA: Ribonucleic Acid
VL: Viral Load

Source of funding.

The study was not funded.

Conflict of interest.

There is no conflict of interest.

Availability of data.

Data used in this study are available upon request from the corresponding author.

Authors contribution.

AS designed the study, conducted data collection, cleaned and analyzed data, and drafted the manuscript.

RM supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

FS supervised the research process.

HN supervised the research process.

JFN supervised the research process.

Author's biography.

Ali Ssemanda is a student of a diploma in Medical Laboratory Technology at Mildmay Institute of Health Sciences.

Richard Miiro is a research supervisor at Mildmay Institute of Health Sciences.

Francisco Ssemuwemba is a research supervisor at Mildmay Institute of Health Sciences.

Hasifah Nansereko is a research supervisor at Mildmay

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

Institute of Health Sciences.
Jane Frank Nalubega is a research supervisor at Mildmay Institute of Health Sciences.

References.

1. Akugizibwe, P., Atuhaire, C., Kiconco, R., & Nuwagira, E. (2023). Retention in HIV care and associated factors among patients receiving antiretroviral therapy at Wakiso Health Centre IV, Uganda. *BMC Health Services Research*, 23(1), 1–10.
2. Fei, X., Zhang, Y., Li, H., & Chen, J. (2025). Viral load suppression and associated factors among people living with HIV on antiretroviral therapy in Asia: A multicountry analysis. *The Lancet Regional Health – Western Pacific*, 45, 100921.
3. Johnson, L. F., Dorrington, R. E., Moolla, H., & Scheibe, A. (2021). Progress towards the 95-95-95 targets in South Africa: Data trends and treatment outcomes. *South African Medical Journal*, 111(8), 737–744.
4. Magezi, V. (2022). Adherence challenges and treatment outcomes among children and adolescents receiving antiretroviral therapy at Ndejje Health Centre IV, Wakiso District. Unpublished report, Uganda Ministry of Health.
5. Tumusiime, D. K., Ssempijja, V., Nakanjako, D., & Kamya, M. R. (2025). Viral load suppression and treatment outcomes among people living with HIV in Uganda: National programmatic data analysis. *AIDS Research and Therapy*, 22(1), 15–24.
8. AYele, T. A., Tessema, G. A., & Kassa, A. M. (2018). Prevalence and associated factors of treatment failure among people living with HIV on antiretroviral therapy in Ethiopia: A systematic review and meta-analysis. *BMC Infectious Diseases*, 18(1), 1–12. https://doi.org/10.1186/s12879-018-3501-3
9. Bulage, L., Ssewanyana, I., Nankabirwa, V., Nsubuga, F., Kihembo, C., Pande, G., Ario, A. R., & Wabwire-Mangen, F. (2017). Factors associated with virological non-suppression among HIV-positive patients on antiretroviral therapy in Uganda, 2014–2015. *BMC Infectious Diseases*, 17(1), 326. https://doi.org/10.1186/s12879-017-2428-3
10. Kipp, W., Konde-Lule, J., Saunders, L. D., Alibhai, A., Houston, S., Rubaale, T., & Okech-Ojony, J. (2010). Antiretroviral treatment for HIV in rural Uganda: Two-year treatment outcomes of a prospective health centre/community-based and hospital-based cohort. *PLoS ONE*, 5(7), e11594. https://doi.org/10.1371/journal.pone.0011594
11. Ministry of Health, Uganda. (2022). *Consolidated guidelines for prevention and treatment of HIV and AIDS in Uganda*. Kampala, Uganda: Ministry of Health.
12. Nasuuna, E., Kigozi, J., Babirye, L., Muganzi, A., Sewankambo, N., & Nakanjako, D. (2018). Low HIV viral suppression rates following the intensive adherence counseling program for HIV clients with viral failure in Uganda. *BMC Public Health*, 18(1), 1048. https://doi.org/10.1186/s12889-018-5964-9
13. Turan, B., Budhwani, H., Fazeli, P. L., Browning, W. R., Raper, J. L., Mugavero, M. J., & Turan, J. M. (2017). How does stigma affect people living with HIV? The mediating roles of internalized and anticipated HIV stigma in the effects of perceived community stigma on health and psychosocial outcomes. *AIDS and Behavior*, 21(1), 283–291. https://doi.org/10.1007/s10461-016-1451-5
14. UNAIDS. (2023). *Global AIDS update 2023: The path that ends AIDS*. Geneva: Joint United Nations Programme on HIV/AIDS (UNAIDS). https://doi.org/10.18356/9789210028370
15. Wringe, A., Isingo, R., Urassa, M., Maiseli, G., Manyalla, R., Changalucha, J., Kalluvya, S., Zaba, B., & Todd, J. (2009). Uptake of HIV voluntary counselling and testing services in rural Tanzania: Implications for effective HIV prevention and equitable access to treatment. *Tropical Medicine & International Health*, 14(5), 1–10.
16. UNAIDS. (2024). *Global AIDS update 2024: The path that ends AIDS*. Joint United Nations Programme on HIV/AIDS (UNAIDS).
17. UNAIDS. (2024). *Eastern and Southern Africa HIV regional overview*. Joint United Nations Programme on HIV/AIDS (UNAIDS).
18. World Health Organization (WHO). (2024). *HIV drug resistance report 2024*. World Health Organization.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.7 No. 3 (2026): March 2026 Issue
https://doi.org/10.51168/sjhrafrica.v7i3.2410
Original Article

PUBLISHER DETAILS

Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
(ISSN 3006-1059) Print
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256 775 434 261
Location: Scholar's Summit Nakigalala, P. O. Box 701432, Entebbe Uganda, East Africa