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Assessment of Compliance to Highly Active Anti-Retroviral Therapy (HAART) among Patients in Selected Hospitals in Ibadan, Oyo State

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Abstract: *The human immunodeficiency virus (HIV) weakens the immune system, leaving individuals increasingly vulnerable to opportunistic infections. This study assessed compliance with highly active antiretroviral therapy (HAART) among patients at selected hospitals in Ibadan, Oyo State. A structured questionnaire was administered, and its reliability was confirmed using a test-retest method, yielding a coefficient of 0.850. Data were analysed using SPSS version 22, employing descriptive statistics and regression analysis to test the study hypotheses. Findings revealed that 63.9% of respondents exhibited high adherence to HAART, reflecting positive treatment outcomes. However, 37.1% reported difficulty in taking their medication at the same time daily, and 44.3% indicated that stigma and discrimination influenced their willingness to adhere to treatment. One-way ANOVA results showed no statistically significant differences in adherence levels based on education (F = .488, p = .691) and age (F = .382,*

p = .766). The study concluded that age, gender, education level, and duration on HAART influence adherence patterns, highlighting the need for patient-centred interventions. High overall adherence rates were observed, yet challenges related to psychosocial factors persist. It is recommended that the government establish support groups and counselling services to address emotional and social barriers such as stigma and hopelessness. These initiatives could foster a supportive environment where patients can share experiences, receive peer encouragement, and access professional guidance to enhance sustained adherence to HAART.
Keywords: assessment, anti-retroviral therapy, highly active, compliance, patients

INTRODUCTION

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) remains a global public health challenge, particularly in Sub-Saharan Africa (Archibong et al., 2019). HIV is a retrovirus that attacks immune system cells, leading to immune deterioration and increased vulnerability to opportunistic infections (Chare, 2018). Globally, an estimated 37.9 million people live with HIV, with 23.3 million receiving antiretroviral therapy (ART), a marked increase from previous years (Addo et al., 2022). Sub-Saharan Africa bears a disproportionate burden, accounting for approximately 70% of global HIV cases and 66% of new infections (Damian et al., 2019). Nigeria ranks third worldwide in the number of people living with HIV, with a prevalence rate of 1.4%, reflecting the continued need for prevention strategies and improved ART access and adherence (Ibezim et al., 2020). The advent of Highly Active Antiretroviral Therapy (HAART) has transformed HIV from a fatal condition to a manageable chronic illness (Usman et al., 2019). HAART improves quality of life and longevity for HIV-positive individuals while reducing transmission risks (Addo, 2022). According to WHO, adherence is defined as the extent to which a person's behaviour in taking medication, following diets, or making lifestyle changes aligns with healthcare recommendations (Archibong et al., 2019).

Effective HIV/AIDS management entails patients' consistent adherence to ART, regular clinical attendance, nutritional and lifestyle compliance, laboratory testing, and engagement in supportive social networks (Owhonda & Luke, 2022). Achieving viral suppression is a central treatment goal (Ojenike, 2019). ART is typically recommended for individuals with a CD4 count below 200/mm³ or those with WHO stage 4 illness (Moosa et al., 2019). Sustained adherence extends lifespan and suppresses viral replication, whereas poor adherence can result in treatment failure and resistance (Azage et al., 2020).

Non-adherence encompasses various behaviours including missed doses, treatment interruptions, sub-therapeutic dosing, and delayed diagnoses. Contributing factors include stigma, challenges in disclosing HIV status, denial of care, and family-related concerns (Ketchaji et al., 2019). Numerous studies have explored these influences, highlighting both personal beliefs and external challenges such as complex medication regimens, side effects, inadequate social support, and poor patient-provider relationships (Kioko & Pertet, 2017). Other influencing factors include distance to ART centres, substance use, and discrimination (Addo et al., 2022). Adherence rates vary across studies. In Nigeria, Anyaike et al. (2019) reported a 92.6% adherence rate, identifying barriers such as lack of transport funds, travel, forgetfulness, medication side effects, and fear of stigma. Conversely, Chijioke-Nwauche and Akanni (2021) found a lower adherence level of 58%. In Turkey, Damian et al. (2019) observed that 61% of participants showed high adherence, with factors such as social support, disease duration, and knowledge of ART significantly influencing adherence. Adegoke et al. (2022) also found that 82.4% of participants had high adherence, with marital status and occupation showing significant associations.

Despite reports of high adherence among many HIV patients, a notable proportion still demonstrates moderate to low adherence. This inconsistency underscores the importance of continued efforts to

understand and address the multifaceted barriers to adherence. Therefore, this study seeks to assess the level of compliance with HAART among patients attending selected hospitals in Ibadan, Oyo State. The study aims to identify specific factors influencing adherence in this population and contribute to strategies that enhance treatment outcomes for people living with HIV..

Specific objectives of this study were to:

1 determine the level of adherence to HAART medication among patients attending selected hospitals in Ibadan, Oyo state;
2 identify the factors that influence compliance to HAART among patients attending selected hospitals in Ibadan, Oyo state; and
3 ascertain barriers to adherence to HAART among patients attending selected hospitals in Ibadan, Oyo state.

METHODOLOGY

A cross-sectional descriptive study design was used to assess compliance to highly active antiretroviral therapy (HAART) among patients attending HIV clinic at selected hospitals in Ibadan, Oyo state. Two general hospitals were purposefully selected because it provides medical services to a wide range of patients, including those living with HIV/AIDS who are receiving highly active antiretroviral therapy (HAART) to manage their condition. The target population were HIV patients attending an HIV clinic in the selected centers. An average of 56 patients attend each facility in a month which is run twice a week. Only patients diagnosed with HIV and receiving HARRT for at least six months and who have given their informed consent participated in the study. Those excluded from the study were patients who were unable to give informed consent and those that were on highly active antiretroviral therapy medication for less than six months. Intact class size was used to get the sample size which was 97.

A self-structured instrument was used to collect data. The questionnaire consisted of four sections; sections A, B, C and D. Items in each of the sections contained close-ended questions. The questionnaire is made up of 33-items. Section A consists of 9 items which include age, religion, marital status, employment status, duration on highly active antiretroviral therapy medication, and monthly income. Section B assessed the level of adherence to highly active antiretroviral therapy medication among patients using the Medication Adherence Rating Scale (MAR-Scale). The Medication Adherence Reasons Scale (MAR-Scale) is a comprehensive scale that consists of 10 items, designed to assess medication adherence among patients. Section C identified the factors influencing compliance to highly active antiretroviral therapy medication among patients. This section comprises 11 items using a close-ended question.

Face and content validity was ensured by public health nurses and test and measurement experts.and reliability was ensured. The reliability of the instrument was ascertained via test retest method. The researchers were present at the study setting personally to administer the questionnaire which had been pretested. The instruments were given to the respondents to fill on the site and retrieved back after they were completely filled. Data was analysed descriptively via mean, percentages and frequency counts and inferentially via one-way ANOVA**.** Confidentiality and non-maleficence were maintained throughout the stage of data collection.

RESULTS

Table 1: Distribution of respondents by socio-demographic characteristics N= 97

Socio-demographic characteristics	Frequency	Percentage
Age		
Below 20 years	19	19.6
20 – 30	25	25.8
31 – 40	39	40.2
Above 40	14	14.4
Sex		
Male	40	41.2
Female	57	58.8
Highest Level of Education		
No formal Education	21	21.6
Primary	39	40.2
Secondary	25	25.8
Tertiary	12	12.4
Duration of ART		
6 month - 1 year	13	13.4
2 - 4 years	34	35.1
5 - 10 years	38	39.2
Above 10 years	12	12.4

Table 1 presents a comprehensive overview of the socio-demographic characteristics of a total of 97 respondents. The age distribution reveals that 19.6% of participants are below 20 years old, 25.8% fall within the 20–30 age group, 40.2% are aged 31–40, and 14.4% are above 40 years old. In terms of gender, the survey includes 41.2% males and 58.8% females. Educational backgrounds are diverse, with 21.6% of respondents having no formal education, 40.2% completing primary education, 25.8% attaining secondary education, and 12.4% achieving tertiary education. Furthermore, the duration of Antiretroviral Therapy (ART) among participants varies, with 13.4% having undergone treatment for 6 months to 1 year, 35.1% for 2–4 years, 39.2% for 5–10 years, and 12.4% for over 10 years. This breakdown offers valuable insights into the composition of the surveyed population, encompassing age, gender, educational levels, and the duration of ART. Such socio-demographic details are essential for an understanding of the characteristics of the study participants.

Table 2: Adherence to HAART medication among patients N= 97

ITEMS	Yes (%)	No (%)	Mean	S.D.
Do you ever forget to take your highly active antiretroviral therapy medication medications	35 (36.1)	62 (63.9)	1.36	0.48
Are you careless at times at times about taking your highly active antiretroviral therapy medications	27 (27.8)	70 (72.2)	1.28	0.45
When you feel better, do you sometimes stop taking your highly active antiretroviral therapy medications	41 (42.3)	56 (57.7)	1.42	0.49
Sometimes if you feel worse when you take the highly active antiretroviral therapy medications, do you stop taking it	42 (43.3)	55 (56.7)	1.43	0.49
I take my highly active antiretroviral therapy medications only when I am sick	46 (47.4)	51 (52.6)	1.47	0.50
It is unnatural of my mind and body to be controlled by my medication	36 (37.1)	61 (62.9)	1.37	0.49
I feel weird on my highly active antiretroviral therapy medications	36 (37.1)	61 (62.9)	1.37	0.49
Highly active antiretroviral therapy medications make me feel tired and sluggish	37 (38.1)	60 (61.9)	1.38	0.49

Table 2 examines the adherence to highly Active Antiretroviral Therapy (HAART) medication among a sample of 97 patients. In the context of forgetting medication, 36.1% of respondents acknowledged occasionally forgetting to take their HAART medication, with a mean value of 1.36 and a standard deviation of 0.48. Similarly, 27.8% admitted to occasional carelessness about taking their medication, yielding a mean of 1.28 and a standard deviation of 0.45. Responses related to stopping medication when feeling better or worse revealed that 42.3% and 43.3% of respondents, respectively, engaged in such behavior. The mean values for these items were 1.42 and 1.43, with standard deviations of 0.49. Additionally, 47.4% of respondents reported taking their medication only when sick, with a mean value of 1.47 and a standard deviation of 0.50.

Concerns about resistance to medication control, feeling weird on medication, and experiencing medication-induced fatigue were expressed by 37.1% to 38.1% of respondents. The mean values for these items ranged from 1.37 to 1.38, with standard deviations of 0.49. Overall, the table offers a detailed breakdown of patient responses, indicating varying degrees of adherence to HAART medication. The mean values and standard deviations provide insights into the trends and variability in reported attitudes, thereby contributing valuable information for healthcare professionals and researchers aiming to understand and address factors influencing medication adherence among individuals undergoing HAART. To summarize the level of adherence to HAART medication among patients, the below classification was used as stated in table 3.

Table 3: Summary regarding adherence to HAART medication among patients

Level	Frequency	Percent
Low	10	10.3
Moderate	25	25.8
High	62	63.9
Total	**97**	**100.0**

Table 3 provides an overview of the distribution of patients across different levels of adherence to HAART medication. The majority of the respondents (63.9%) demonstrate high adherence, while 25.8% show moderate adherence. A smaller proportion, 10.3%, falls into the low adherence category. This summary allows healthcare professionals and researchers to quickly assess the overall adherence levels within the studied patient population, providing valuable insights for intervention strategies and healthcare management. High adherence is generally desirable for optimal treatment outcomes in conditions requiring continuous medication, such as HIV/AIDS treatment with HAART.

Table 4: Factors that influence compliance to HAART among patients N= 97

ITEMS	Yes (%)	No (%)	Mean	SD
Do you find it difficult to remember to take your highly active antiretroviral therapy medications as prescribed?	31 (32.0)	66 (68.0)	1.32	0.47
Have you ever experienced side effects from your highly active antiretroviral therapy medications that made it hard to take them as prescribed?	24 (24.7)	73 (75.3)	1.25	0.43
Do you have concerns about the long-term effects of taking highly active antiretroviral therapy medications?	39 (40.2)	58 (59.8)	1.40	0.49
Do you find it hard to take your highly active antiretroviral therapy medications at the same time every day?	36 (37.1)	61 (62.9)	1.37	0.49
Do you feel stigmatized or discriminated against because of your HIV status, which affects your willingness to take highly active antiretroviral therapy medications as prescribed?	43 (44.3)	54 (55.7)	1.44	0.49
Do you have difficulty affording the cost of your highly active antiretroviral therapy medications?	50 (51.5)	47 (48.5)	1.51	0.50

Have you ever felt that your healthcare provider did not explain your highly active antiretroviral therapy medications and how to take them clearly enough?	34 (35.1)	63 (64.9)	1.35	0.48
Do you have concerns about the effectiveness of highly active antiretroviral therapy medications in controlling HIV?	31 (32.0)	66 (68.0)	1.32	0.47

Table 4 delves into the various factors influencing adherence to Highly Active Antiretroviral Therapy (HAART) medications among a cohort of 97 surveyed patients. Firstly, 32.0% of respondents admitted difficulty in remembering to take their HAART medications as prescribed, with a mean value of 1.32 and a standard deviation of 0.47. Similarly, 24.7% reported experiencing side effects that hindered their adherence, with a mean of 1.25 and a standard deviation of 0.43. Concerns about the long-term effects of HAART medications were expressed by 40.2% of respondents, yielding a mean value of 1.40 and a standard deviation of 0.49. Additionally, 37.1% found it challenging to take their medications at the same time every day, with a mean of 1.37 and a standard deviation of 0.49.

The impact of HIV-related stigma and discrimination on medication willingness was acknowledged by 44.3% of respondents, reflecting a mean value of 1.44 and a standard deviation of 0.49. Affordability concerns were prevalent, with 51.5% reporting difficulties in covering the costs of HAART medications, resulting in a mean value of 1.51 and a standard deviation of 0.50. Furthermore, communication issues with healthcare providers were noted by 35.1% of respondents, leading to a mean value of 1.35 and a standard deviation of 0.48. Lastly, 32.0% expressed concerns about the effectiveness of HAART medications in controlling HIV, with a mean value of 1.32 and a standard deviation of 0.47. This comprehensive analysis sheds light on the diverse challenges and concerns faced by patients in adhering to HAART medications.

Table 5: Barriers to adherence to HAART among patients N= 97

ITEMS	**SA (%)**	**A (%)**	**D (%)**	**SD (%)**	**Mean**	**SD**
Side effects of antiretroviral experienced	6 (6.2)	50 (51.5)	38 (39.2)	3 (3.1)	2.61	0.65
Lack of privacy and confidentiality	2 (2.1)	38 (39.2)	49 (50.5)	8 (8.2)	2.35	0.66
Stigmatization	7 (7.2)	50 (51.5)	39 (40.2)	1 (1.0)	2.65	0.63
No cure for the disease may result in a state of hopelessness	29 (29.9)	64 (66.0)	3 (3.1)	1 (1.0)	3.25	0.56
Lack of support	27 (27.8)	65 (57.0)	3 (3.1)	2 (2.1)	3.21	0.59

Key: (SA*) Strongly Agree, (A) Agree, (D) Disagree, (SD) Strongly Disagree*

Table 5 offers a comprehensive analysis of the barriers to adherence to Highly Active Antiretroviral Therapy (HAART) among a cohort of 97 patients. Respondents expressed concerns about side effects, with 57.7% acknowledging this barrier. The mean value of 2.61 suggests a moderate level of impact, and the standard deviation of 0.65 indicates some variability in responses. Privacy and confidentiality issues were recognized by 41.3% of respondents. The mean value of 2.35 suggests a moderate impact, with a standard deviation of 0.66 indicating variability in perceptions. Stigmatization was acknowledged by 58.7% of respondents. The mean value of 2.65 reflects a moderate impact, and the standard deviation of 0.63 indicates some variability in responses. The perception of hopelessness due to the lack of a cure was reported by 96.0% of respondents. The high mean value of 3.25 suggests a substantial impact, with a low standard deviation of 0.56 indicating a more consistent perception among respondents. Respondents identified a lack of support as a barrier, with 85.8% acknowledging this issue. The mean value of 3.21 indicates a considerable impact, and the standard deviation of 0.59 suggests moderate variability in responses.

Test of Hypotheses

$H_0$1: There is no significant difference in the level of adherence to HAART medication based on level of education

Table 6: One-way ANOVA showing the difference in the level of adherence to HAART medication based on level of education

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	2.670	3	.890	.488	.691
Within Groups	169.495	93	1.823		
Total	172.165	96			

The results in Table 6 revealed no significant difference in the level of adherence to HAART medication based on level of education (F = .488, *p* = .691). Therefore, the null hypothesis is not rejected. Hence, there is no significant difference in the level of adherence to HAART medication based on level of education

$H_0$2: There is a no significant difference in the level of adherence to HAART medication based on age

Table 7: One-way ANOVA showing the difference in the level of adherence to HAART medication based on age

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	2.097	3	.699	.382	.766
Within Groups	170.068	93	1.829		
Total	172.165	96			

The results in Table 7 revealed significant difference in the level of adherence to HAART medication based on age (F = .382, p = .766). Therefore the null hypothesis is not rejected. Hence, there is no significant difference in the level of adherence to HAART medication based on age

DISCUSSION OF FINDINGS

The study examined the adherence levels to Highly Active Antiretroviral Therapy (HAART) among 97 patients and found that a significant proportion (63.9%) exhibited high adherence. This aligns with optimal HIV/AIDS treatment outcomes, such as achieving viral suppression, improved immune function, and reduced risk of opportunistic infections. Nevertheless, 25.8% of respondents demonstrated moderate adherence, while 10.3% had low adherence. These variations underscore the multifaceted challenges associated with consistent medication-taking behaviour. As the literature suggests, adherence can be influenced by a complex interplay of factors, including psychological, social, and healthcare-related barriers (Mills et al., 2006; Bangsberg et al., 2001).

The high level of adherence observed is promising, indicating that a majority of patients are on the right track towards effective treatment. However, the presence of moderate and low adherence among a notable minority calls for tailored interventions. For individuals with high adherence, healthcare providers should focus on reinforcing positive health behaviours. Those with moderate adherence may benefit from support in overcoming specific barriers such as forgetfulness or routine disruption, while individuals with low adherence might require more intensive, multifaceted interventions (Langebeek et al., 2014).

Several specific factors were identified as barriers to adherence. Forgetfulness, reported by 32.0% of respondents, remains a significant challenge, consistent with previous studies. Memory aids and digital reminders have been recommended in the literature as effective strategies to counteract this issue (Mills et al., 2018). Furthermore, 24.7% of respondents reported that side effects affected their ability to adhere to HAART. The management of side effects, through medication adjustments and patient education, is crucial in maintaining adherence levels. In addition, 40.2% of respondents expressed concerns about the long-term effects of HAART. These concerns are often grounded in misconceptions or insufficient information and highlight the importance of comprehensive patient counselling to mitigate fears about prolonged use of antiretroviral medications (Mills et al., 2019).

Irregular medication timing was another issue, with 37.1% of participants finding it difficult to take their medication at the same time each day. Consistency in timing is vital for the pharmacological effectiveness of HAART, necessitating interventions that support routine-building, such as mobile alerts or simplified dosing regimens (Langebeek et al., 2019). Additionally, HIV-related stigma and discrimination were reported by 44.3% of respondents as affecting their willingness to adhere to medication. Literature underscores that psychosocial factors, particularly stigma, can severely undermine adherence by discouraging individuals from taking medications openly or seeking support (Sayles et al., 2018). Counselling and stigma-reduction programs can thus play a pivotal role in enhancing adherence.

Economic factors also emerged as critical barriers. Affordability concerns were reported by 51.5% of respondents, highlighting the need for expanded access to affordable treatment and financial assistance programs (Yu et al., 2018). Communication challenges with healthcare providers, cited by 35.1% of participants, further emphasise the role of effective provider-patient interaction. Clear instructions and responsive communication can significantly enhance patients' understanding and commitment to their treatment regimen (Soucx et al., 2011). Additionally, 32.0% of respondents expressed doubts about the effectiveness of HAART, pointing to a gap in understanding treatment efficacy. Healthcare

professionals must consistently reinforce evidence-based messages about the proven success of antiretroviral therapy in managing HIV.

More profoundly, 57.7% of respondents acknowledged side effects as a key barrier, with a moderate mean impact of 2.61. This highlights that while side effects are a concern, they are potentially manageable through appropriate medical support. Similarly, 41.3% of respondents cited privacy and confidentiality concerns as affecting their treatment behaviour, with a moderate impact score of 2.35. This reflects the ongoing stigma surrounding HIV and underscores the need for confidentiality assurances and supportive clinical environments (Bharat, 2011). Stigma itself was reported by 58.7% of participants as an adherence barrier, with a moderate impact (mean = 2.65), consistent with extensive literature recognising stigma as a major deterrent to effective treatment (Steward et al., 2008). Emotional and psychological factors also surfaced strongly. A staggering 96.0% of respondents indicated a sense of hopelessness due to the lack of a cure, with a high impact score of 3.25. This finding is particularly concerning, as it suggests a profound need for psychosocial interventions and mental health support within HIV care frameworks (Emlet, 2018). Similarly, 85.8% of respondents reported a lack of social support as a barrier, with an impact score of 3.21. Support systems whether familial, community-based, or institutional have been consistently associated with improved adherence. Their absence can leave patients vulnerable to emotional distress and disengagement from care (Simoni et al., 2018).

The socio-demographic profile of respondents revealed a relatively young population, predominantly female, with varied educational backgrounds. A significant portion had been on HAART for 5 to 10 years. This diversity suggests that adherence interventions should be context-specific and culturally sensitive, accounting for individual and social factors influencing adherence behaviours..

CONCLUSION

The socio-demographic distribution highlighted diverse characteristics among the respondents, emphasizing the need for personalized healthcare approaches. Age, gender, education, and duration on HAART varied, underscoring the importance of tailoring interventions to the specific needs and circumstances of individual patients. Adherence levels were predominantly high among the surveyed patients, with the majority demonstrating consistent medication adherence. However, the study identified various factors influencing compliance, such as concerns about side effects, difficulties in medication routines, and communication issues with healthcare providers. These findings align with existing literature, emphasizing the multifaceted nature of barriers to adherence in HIV/AIDS treatment.

The barriers identified in the study, ranging from concerns about side effects and stigma to a sense of hopelessness due to the lack of a cure and a lack of support, underscore the complex interplay of psychosocial, emotional, and structural factors impacting adherence. Recognizing the impact of these barriers is crucial for designing targeted interventions that address the specific needs and challenges faced by patients. The literature-supported implications of the findings point towards the importance of implementing tailored interventions, including patient education programs, support groups, stigma reduction efforts, and integrated mental health and psychosocial support within HIV/AIDS care. Ongoing monitoring, personalized counseling, and a holistic approach to patient care are paramount for optimizing adherence and long-term treatment success.

Recommendations

Based on the comprehensive findings from the study on adherence to Highly Active Antiretroviral Therapy (HAART) among a cohort of 97 patients, the following recommendations were proposed:

1. Develop and implement tailored adherence interventions that address specific barriers identified in the study, such as concerns about side effects, privacy issues, stigma, hopelessness, and lack of support. These interventions should be personalized to the individual needs of patients based on their socio-demographic characteristics and duration on HAART.

2. Establish patient education programs to enhance awareness and understanding of HAART medication, its benefits, and potential side effects. These programs should focus on improving health literacy and empowering patients to actively participate in their treatment plans.

3. Facilitate the creation of support groups and counseling services to address psychosocial and emotional factors influencing adherence. These platforms can provide a safe space for patients to share experiences, receive peer support, and access counseling services to cope with challenges related to stigma, hopelessness, and lack of support.

4. Implement stigma reduction initiatives at both community and healthcare levels. These initiatives should aim to destigmatize HIV/AIDS, educate the public, and create environments that promote inclusivity and acceptance. Additionally, healthcare providers should receive training on delivering stigma-free care.

5. Integrate mental health and psychosocial support services into routine HIV/AIDS care. Recognizing the psychological impact of living with a chronic condition, providing access to mental health professionals can contribute to overall well-being and help address emotional challenges affecting adherence.

6. Improve communication between healthcare providers and patients by implementing strategies to address issues related to understanding medication regimens, potential side effects, and the long-term benefits of HAART. Clear and patient-friendly communication can enhance patient comprehension and adherence.

REFERENCES

Addo, M. K., Aboagye, R. G., & Tarkang, E. E. (2022). Factors influencing adherence to antiretroviral therapy among HIV/AIDS patients in the Ga West Municipality, Ghana. *IJID Reg*, *3*, 218–225. https://doi.org/10.1016/j.ijregi.2022.04.009

Archibong, F., Ugbonna, U. K., Okoye, I., Legogie, A., Fadipe, I., Nyong, E., ... & Okokon, I. B. (2022). A comparative study of the predictors of treatment adherence among patients on antiretroviral therapy at rural and urban centers in Cross River State, Nigeria. *Calabar Journal of Health Sciences, 6*, 24–30. https://doi.org/10.25259/cjhs_16_2019

Bangsberg, D. R., Hecht, F. M., Charlebois, E. D., Zolopa, A. R., Holodniy, M., Sheiner, L., ... & Moss, A. (2019). Adherence to protease inhibitors, HIV-1 viral load, and development of drug resistance in an indigent population. *AIDS, 15*(9), 1115–1122.

Ceylan, E., Koc, A., Inkaya, A. C., & Unal, S. (2019). Determination of medication adherence and related factors among people living with HIV/AIDS in a Turkish university hospital. *Turkish Journal of Medical Sciences, 49*(1), 198–205. https://doi.org/10.3906/sag-1802-137

Chijioke-Nwauche, I. N., & Akanni, Y. (2021). Influencing factors of adherence to antiretroviral drugs among people living with HIV in South-South Nigeria. *Saudi Journal of Medical and Pharmaceutical Sciences, 7*(2), 145–152. https://doi.org/10.36348/sjmps.2021.v07i02.011

Damian, D. J., Ngahatilwa, D., Fadhili, H., Mkiza, J. G., Mahande, M. J., Ngocho, J. S., & Msuya, S. E. (2019). Factors associated with HIV status disclosure to partners and its outcomes among HIV-positive women attending care and treatment clinics at Kilimanjaro Region, Tanzania. *PLoS ONE, 14*(3), e0211921. https://doi.org/10.1371/journal.pone.0211921

Emlet, C. A. (2018). An examination of the social networks and social isolation in older and younger adults living with HIV/AIDS. *Health & Social Work, 31*(4), 299–308.

Gardner, E. M., Burman, W. J., Maravi, M. E., Davidson, A. J., & Durability of Viral Suppression Working Group. (2019). Antiretroviral medication adherence in HIV-infected adults: A systematic review of qualitative studies. *Patient Preference and Adherence, 3*, 371.

Ibezim, M., Ogbodo, U., Ndie, J., Kanu-Oji, O., Oji, N., Dada, M., & Ifemenam, M. (2020). Factors affecting level of adherence among people living with HIV attending antiretroviral care at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State. *Central African Journal of Public Health, 6*(2), 80–87. https://doi.org/10.11648/j.cajph.20200602.15

Ketchaji, A., Ngouakam, H., Assah, F., Ndjalla, A., Monebenimp, F., & Ngowe Marcelin, N. (2019). A qualitative assessment of the determinants of adherence to antiretroviral therapy among adolescents living with HIV in the Centre Region of Cameroon. *Journal of Environmental Science and Public Health, 3*(3). https://doi.org/10.26502/jesph.96120067

Kioko, M. T., & Pertet, A. M. (2017). Factors contributing to antiretroviral drug adherence among adults living with HIV or AIDS in a Kenyan rural community. *African Journal of Primary Health Care & Family Medicine, 9*(1), e1–e7. https://doi.org/10.4102/phcfm.v9i1.1343

Langebeek, N., Gisolf, E. H., Reiss, P., Vervoort, S. C., Hafsteinsdóttir, T. B., Richter, C., ... & Mudrikova, T. (2018). Predictors and correlates of adherence to combination antiretroviral therapy (ART) for chronic HIV infection: A meta-analysis. *BMC Medicine, 12*(1), 142.

Mills, E. J., Nachega, J. B., Buchan, I., Orbinski, J., Attaran, A., Singh, S., ... & Bangsberg, D. R. (2019). Adherence to antiretroviral therapy in sub-Saharan Africa and North America: A meta-analysis. *JAMA, 296*(6), 679–690.

Moosa, A., Gengiah, T. N., Lewis, L., & Naidoo, K. (2019). Long-term adherence to antiretroviral therapy in a South African adult patient cohort: A retrospective study. *BMC Infectious Diseases, 19*(1), 775. https://doi.org/10.1186/s12879-019-4410-8

Ojenike, O. (2019). Barriers to antiretroviral medication adherence among key populations in Nigeria. *Acta Scientific Pharmaceutical Sciences, 3*(11), 59–61. https://doi.org/10.31080/asps.2019.03.0428

Owhonda, G., & Luke, A. (2022). Association between self-reported medication adherence and virologic outcome among human immuno-deficiency virus positive adults accessing care at a tertiary treatment centre in Rivers State, Nigeria. *International Journal of Community Medicine and Public Health, 9*(9). https://doi.org/10.18203/2394-6040.ijcmph20222228

Simoni, J. M., Pearson, C. R., Pantalone, D. W., Marks, G., & Crepaz, N. (2019). Efficacy of interventions in improving highly active antiretroviral therapy adherence and HIV-1 RNA viral load: A meta-analytic review of randomized controlled trials. *Journal of Acquired Immune Deficiency Syndromes, 43*, S23.

Usman, S., Shehu, A., Ajumobi, O., Gidado, S., Dalhatu, I., Balogun, M., Riyad, M., Saude, I., Adewuyi, P., & Nsubuga, P. (2019). Predictors of non-adherence to antiretroviral therapy among HIV patients in secondary health care facilities in Kano State, Nigeria: A case-control study. *The Pan African Medical Journal, 32*(Supp 1), 3. https://doi.org/10.11604/pamj.supp.2019.32.1.13746

Yu, Y., Luo, D., Chen, X., Huang, Z., Wang, M., & Xiao, S. (2018). Medication adherence to antiretroviral therapy among newly treated people living with HIV. *BMC Public Health, 18*, 825. https://doi.org/10.1186/s12889-018-5731-z