Demographic, Behavioural and Clinical Characteristics of HIV-infected Adults Initiating Antiretroviral Therapy in Rural ART Clinics in the Centre Region of Cameroon

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Abstract

Despite considerable progress in the scale-up of antiretroviral therapy programs in Cameroon, disparities persist between urban and rural settings. Understanding the characteristics of rural populations is crucial for designing effective, context-specific interventions that address barriers to early HIV care engagement. A retrospective cohort study was conducted of all HIV infected adults who initiated ART at 10 rural ART clinics in the Centre Region of Cameroon between June 2020 and May 2021. Patients' medical records were reviewed for data collection. Of the 2 591 HIV infected adults included in the analysis, 983 (37.9%) were males and 1 608 (62.1%) females. Mean age at initiation was 38.91 ± 11.41 years with statistically significant difference between genders (p = 0.0002). A higher percentage of females (34.8%) initiated care in the 21-30 years age group than males (18.6%) (χ^2 = 87.163, p < 0.0001). More females initiating ART had no formal education (10.3%) or primary education (42.3%) compared to their male counterparts (8.1% and 40.7%, respectively) (χ^2 = 13.213, p=0.021). Females (56.7%) were more likely not to disclose their HIV status to their partners than males (53.2%) (χ^2 = 9.380, p = 0.009). Moreover, more females (71.1%) compared to males (41.1%) initiated ART with TDF/3TC/DTG (χ^2 = 35.509, p < 0.0001*). The findings from the study show the complexity of demographic, behavioural and clinical factors influencing ART engagement emphasising the importance of tailored interventions to address the unique challenges faced by both males and females during this critical phase of care.*

Keywords: Antiretroviral Therapy, Cameroon, Cohort Study, Rural Populations, Tailored Interventions.

Introduction

The Human Immunodeficiency Virus (HIV) Infection with ongoing transmission in all countries, remains a major global public health concern that has claimed about 40.4 million lives so far from AIDS-related illnesses since the start of the epidemic [1, 2]. Globally, an estimated 39.0 million people were living with HIV (PLVIH) in 2022, of whom 25.6 million were in the WHO African Region representing two-thirds of the global burden. Sub-Saharan Africa bears a significant burden of the epidemic as about 59% of the 4,500 people who contract HIV every day in the world live in Sub-Saharan Africa [1, 2].

The Joint United Nations Program on HIV/AIDS (UNAIDS) announced the

ambitious 95-95-95 strategy in 2014 to end the AIDS epidemic by 2030 by ensuring that 95% of people living with HIV know their status, 95% of those who know their status are on treatment, and 95% of those on antiretrovirals have a suppressed viral load which is an optimal antiretroviral treatment (ART) outcome necessary to improve the patient's health and reduce the risk of HIV transmission to others [1]. However, by the end of 2022 globally, 86% of all HIV-positive individuals knew their status, 76% had access to care, and 71% had viral suppression [1, 2].

Cameroon, a country with an estimated population of 27 874 766 people, has a mixed HIV/AIDS epidemic with one or more concentrated epidemics within a generalized epidemic [3]. In 2022, the projected number of PLHIV in Cameroon was 494 476 with a nationwide incidence of HIV of 0.27% among people aged 15 - 64 according to the Cameroon Population-based HIV Impact Assessment (CAMPHIA), carried out between July 2017 and February 2018 [4]. Though great progress has been made in reducing the burden of the HIV/AIDS pandemic with the introduction of lifelong antiretroviral medications in many countries [5], Cameroon, like many other Sub-Saharan African countries, still struggles with the complexities of HIV care in rural areas. Despite considerable progress in the scale-up of antiretroviral therapy (ART) programs, challenges persist in optimising the initiation of HIV-infected adults on ART, particularly in rural settings. Limited healthcare infrastructure, socio-economic disparities, distance from health facilities and cultural factors contribute to the unique challenges faced by individuals seeking and initiating ART in these settings [6, 7].

The World Health Organization (WHO) has underscored the importance of early initiation of ART to improve clinical outcomes and reduce HIV transmission [8]. However, achieving timely and equitable access to ART in resource-limited settings, such as rural areas, presents unique challenges. Previous studies have emphasised the need for tailored interventions that consider the specific characteristics and barriers faced by individuals in rural settings [9, 10] and understanding the characteristics of this population is crucial for designing effective, context-specific interventions that address barriers to early HIV care engagement. This study aims to investigate the key socio-demographic, behavioural and clinical characteristics of HIV-infected adults initiating ART in rural ART clinics within the Centre Region of Cameroon. The study builds upon existing research and seeks to fill a critical gap in the literature by examining the characteristics of HIV-infected adults initiating ART in rural ART clinics within the Centre Region of Cameroon. By shedding light on the unique characteristics and challenges faced by this population, we aim to contribute evidence that can inform policy and programmatic decisions and guide the development of context-specific interventions, ultimately enhancing the effectiveness of HIV care delivery programs in rural settings. Findings from this study may also serve as a foundation for the development of targeted strategies to improve the efficiency and inclusivity of ART initiation in rural areas.

Methods

Study Sites

The study was conducted in 10 ART clinics in the rural areas of the Centre region of Cameroon. The Centre Region occupies about 69,000 km^2 of the central plains of the Republic of Cameroon. It is bordered to the north by the Adamawa Region, to the south by the South Region, to the east by the East Region, and the West by the Littoral and West Regions. It is the second largest (after the East Region) region of Cameroon in terms of land area. The Centre region is the region with the political capital of

Cameroon and has 30 health districts for a total of 3 724 00 inhabitants with each district having a district hospital [11]. In the centre region, a total of 105 health facilities provide HIV care and treatment services. The region is one of the six regions with HIV prevalence (3.5%) above the national prevalence (2.7%) [3].

We employed a purposive sampling approach to select the 10 ART clinics constituting the study sites. This was based on their rural locations and the number of patients on ART in the sites. These facilities were also receiving technical support from the Georgetown Global Health organisation for the implementation of the TIDE Program, which is funded by the US President's Emergency Plan for AIDS Relief Program (PEPFAR). Consequently, these health facilities are actively engaged in the implementation of differentiated HIV case-finding strategies by the Cameroon Country Operational Plan (COP) to meet programmatic targets. To facilitate our study, we categorised these health facilities into different tiers based on the number of PLHIV receiving ART services. Tier 1 health facilities included those with more than 2 000 PLHIV on ART, Tier 2 encompassed health facilities with 1 001 to 2 000 PLHIV on ART, Tier 3 consisted of health facilities serving 501 to 1 000 PLHIV, and Tier 4 included health facilities supporting 500 PLHIV on ART or fewer.

Study Design

The study was a retrospective cohort study based on a medical records review. The study cohort consisted of HIV-infected adults who were diagnosed with HIV infection and initiated on first-line antiretroviral therapy between June 2020 to May 2021 in the 10 rural ART clinics in the Centre region of Cameroon. Individual patient's demographic, behavioural and clinical characteristics were abstracted retrospectively from their medical records and analysed.

Study Population

The study population consisted of HIV-infected adults who were initiated on ART between June 2020 and May 2021 in the 10 selected rural ART clinics of the Centre Region of Cameroon. In all, 2 819 HIV-infected individuals were initiated on ART between June 2020 and May 2021 in the 10 selected rural ART clinics. Of the 2 819 initiated clients, 2 591 (91.9%) were included in the analysis. From the 228 participants excluded from the analysis, 151 (66.2%) were children and adolescents less than 21 years old, 42 (18.4%) were patients transferred-in from other facilities, and 35 (15.4%) were patients whose medical records were not found (Figure 1).
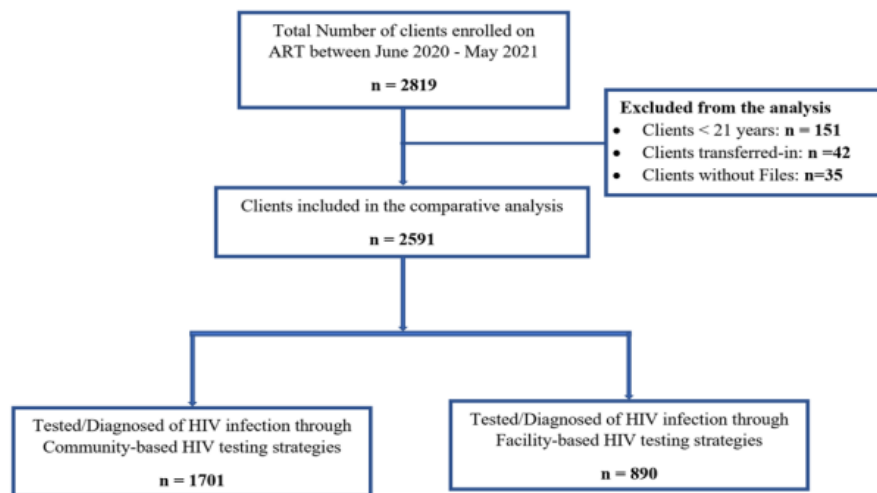
Figure 1. Flow Diagram for HIV Infected Patients Initiated on ART in 10 Rural ART Clinics in the Centre Region of Cameroon.

Selection of Participants

The individual medical records of all HIV infected adults ($\geq$ 21 years) initiated on ART between June 2020 and May 2021 in the 10 rural ART clinics were eligible for the study. However, we excluded the individual medical records of patients younger than 21 years at the time of initiation on ART, those of adult patients transferred-in from other health facilities into the study cohort, and those of adult patients with incomplete information or missing individual medical records.

Data Abstraction and Management

A data abstraction form was designed from the patients' individual medical records to extract patients' demographic, behavioural and clinical characteristics that are routinely documented during ART initiation. Data were manually abstracted from the individual medical records by trained HIV Case Managers recruited from the selected health facilities who were familiar with HIV service tools and were trained on how to extract data using a structured data abstraction tool. They were supervised by trained Data Clerks and Monitoring and Evaluation Officers. Data abstraction forms were reviewed daily by the supervisors and 10% of the adult patients' medical records were randomly selected and re-done by the research team in each study facility to ensure data quality. Any discrepancy observed was addressed by the study team before data entry and analysis. Data collection took place between May and June 2023. The data collected were entered in Microsoft Excel and saved in a file on a laptop only accessible to the researcher. As back up, the data were also saved in a drop box, so it could be retrieved in case of any losses.

Data Analysis and Presentation

The excel database was then imported into IBM SPSS Statistics for Windows, Version 23.0. (Armonk, NY: IBM Corp) for analysis. Before data analysis, data cleaning was done. Descriptive statistics were generated and presented in the form of tables and graphs to assess the distributions of study variables including means, standard deviations, frequencies, and percentages. Bivariate analysis with Pearson chi-squared statistical test was used to determine any associations between gender and other variables. The cut-off point for statistical significance was set at $p<0.05$ at 95% confidence interval.

Ethical Considerations

Data collected for this retrospective cohort study were fully anonymized for analysis. The case report forms used unique ART codes to identify participants making them anonymous. Ethical approval was obtained from the Centre Regional Ethics Committee for Human Health Research with reference number CE N0: 0003/CRERSHC/2023. Administrative approval for the study was obtained from the Regional Delegation of Public Health of the Centre Region with reference N0: 0329/AUT/MINSANTE/SG/DRSPC/ST-CRERSHC. The study was based on the medical records review, so no informed consent was sought from participants. All information collected about a participant during the course of the study was kept on a database protected by a password and was strictly confidential.

Results

HIV Testing Modalities of HIV Infected Adults Initiating ART in 10 Rural Clinics in the Centre Region of Cameroon

An analysis of the distribution of HIV testing modalities and their prevalence among the study participants shows that of the 2 591 HIV infected adults included in the analysis, the majority, 1 701 (65.7%) were diagnosed of HIV-infection through community-based HIV testing strategies and 890 (34.3%) diagnosed through facility-based HIV testing.
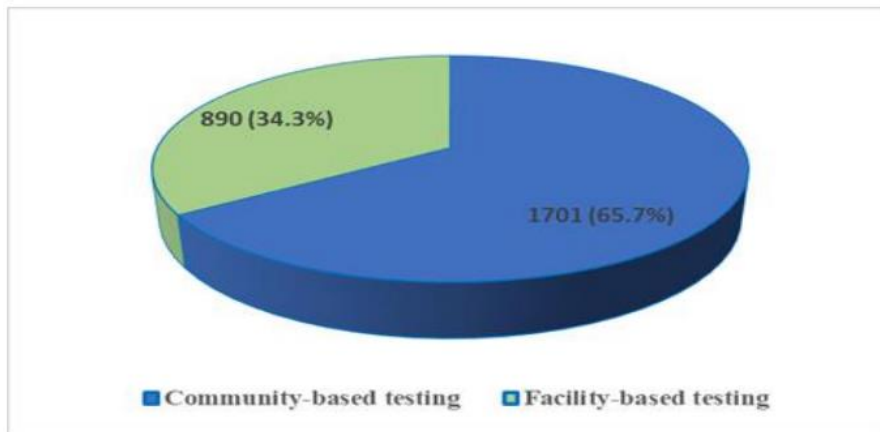
Figure 2. HIV Testing Modalities of HIV Infected Adults Initiating ART in Rural Clinics in the Centre Region of Cameroon.

Baseline Sociodemographic Characteristics of Participants

The socio-demographic characteristics of participants presented on Table 1 show that the mean age at initiation of the entire cohort was 38.91 ± 11.41 years. We observed a statistically significant difference in age between genders (p = 0.0002). While the mean age for males was 39.51 years ($\pm$ 0.28), females had a slightly lower mean age of 37.76 years ($\pm$ 0.38). Regarding age groups at initiation, the study found a significant association ($\chi^2 = 87.163$, p < 0.0001) between gender and the age group at ART initiation. Notably, a higher percentage of females (34.8%) initiated care in the 21-30 years age group in contrast to males (18.6%). Conversely, more males (35.0%) entered care in the 31-40 years age group compared to females (30.2%). Residential distribution showed that the majority of the participants resided more than 5 km from the healthcare facility (73.7%). Although there was a slight difference between males and females, the difference did not reach statistical significance ($\chi^2 = 3.736$, p = 0.154). Marital status at ART initiation shows significant variation ($\chi^2 = 39.967$, p < 0.0001) between males and females. While a substantial number of participants initiating ART were single (38.7%), there were more males (40.2%) initiating ART as single compared to females

(37.9%). Also, the prevalence of individuals initiating ART who were widow(er) was notably higher in females (10.0%) compared to males (3.7%). Education levels at initiation demonstrated significant disparities (χ^2 = 13.213, p = 0.021) between genders. A higher percentage of females initiating ART had no formal education (10.3%) or primary education (42.3%) compared to males (8.1% and 40.7%, respectively). Occupational differences at initiation were also observed (χ^2 = 21.655, p = 0.005). More males were engaged in farming (44.0%), while more females identified as housewives (18.3%).

Table 1. Sociodemographic Characteristics of HIV Infected Adults Initiating ART in Rural ART Clinics in the Centre Region of Cameroon

Characteristics	Total	Male	Female	χ^2	p-value
	N (%)	n (%)	n (%)		
Age groups at initiation					
Mean ± SD	38.91±11.41	39.51±0.28	37.76±0.38		**0.0002***
21 – 30 years	743 (28.7)	183 (18.6)	560 (34.8)		
31 – 40 years	829 (32.0)	344 (35.0)	485 (30.2)	87.163	**< 0.0001***
41 – 50 years	613 (23.7)	294 (29.9)	319 (19.8)		
51 + years	406 (15.7)	162 (16.5)	244 (15.2)		
Residence					
< or = 5 km	664 (25.6)	233 (23.7)	431 (26.8)	3.736	0.154
>5km	1910 (73.7)	745 (75.8)	1165 (72.5)		
Missing	17 (0.7)	5 (0.5)	12 (0.7)		
Marital Status at initiation					
Single	1004 (38.7)	395 (40.2)	609 (37.9)		
Married (monogamy)	405 (15.6)	170 (17.3)	235 (14.6)		
Married (polygamy)	71 (2.7)	35 (3.6)	36 (2.2)		
Widow(er)	196 (7.6)	36 (3.7)	160 (10.0)	39.967	**< 0.0001***
Divorced	47 (1.8)	19 (1.9)	28 (1.7)		
Concubine	837 (32.3)	318 (32.3)	519(32.3)		
Missing	31 (1.2)	10 (1.0)	21 (1.3)		
Highest Level of education at initiation					
Did not go to school	245 (9.5)	80 (8.1)	165 (10.3)		
Primary	1080 (41.7)	400 (40.7)	680 (42.3)		
Secondary	653 (25.2)	245 (24.9)	408 (25.4)	13.213	**0.021***
High school	348 (13.4)	149 (15.2)	199 (12.4)		
University and higher	91 (3.5)	46 (4.7)	45 (2.8)		
Missing	174 (6.7)	63 (6.4)	111 (6.9)		
Occupation at initiation					
Unemployed	249 (9.6)	92 (9.4)	157 (9.8)		
Housewife	294 (11.3)	0 (0%)	294 (18.3)		
Farmer	1114 (43.0)	433 (44.0)	681 (42.4)	21.655	**0.005***

Business	251 (9.7)	95 (9.7)	156 (9.7)		
Student	37 (1.4)	15 (1.5)	22 (1.4)		
Civil servant	35 (1.4)	16 (1.6)	19 (1.2)		
Employed in the private sector	95 (3.7)	45 (4.6)	50 (3.1)		
Others	429 (16.6)	252 (26.6%)	177 (11.0)		
Missing	87 (3.4)	35 (3.6)	52 (3.2)		

Baseline Behavioural and Clinical Characteristics of Participants

The analysis of key behavioural and clinical characteristics of HIV-infected adults at the initiation of antiretroviral therapy in Table 2 shows that the majority of participants, (55.4%) did not inform their partners of their HIV status at the initiation of ART. We observed a statistically significant ($\chi^2 = 9.380$, p = 0.009*) gender difference in the disclosure of HIV status to partners. This lack of disclosure was more prevalent among females (56.7%) than males (53.2%). Regarding sharing of HIV status with family and/or friends, 54.4% of participants did not disclose their status to family and/or friends. This pattern was more common among males (56.8%) than females (52.9%). Gender differences were not statistically significant in this aspect ($\chi^2 = 3.635$, p = 0.162). Although more males (53.2%) than females (85.4%) initiated ART at WHO Clinical stage 1, the differences in clinical staging among males and females were not statistically significant ($\chi^2 = 4.483$, p = 0.345). The analysis of the ART regimen at initiation revealed significant differences in prescription patterns between males and females ($\chi^2 = 35.509$, p < 0.0001*). The majority of participants, (74.9%) initiated treatment with TDF/3TC/DTG, with a higher prevalence among females (71.1%) compared to males (41.1%).

Table 2. Behavioural and Clinical Characteristics of HIV Infected Adults Initiating ART in Rural ART Clinics in the Centre Region of Cameroon

Characteristics	Total	Male (n=983)	Female (n=1 608)	χ^2	p-value
	N (%)	n (%)	n (%)		
Whether Partner was informed of HIV status at initiation					
No	1435 (55.4)	523 (53.2)	912 (56 .7)		
Yes	899 (34.7)	375 (38.1)	524 (32.6)	9.380	**0.009***
Missing	257 (9.9)	85 (8.6)	172 (10,7)		
Whether Client shared HIV status with Family and/or friend					
No	1409 (54.4)	558 (56.8)	851 (52.9)		
Yes	936 (36.1)	337 (34.3)	599 (37.3)	3.635	0.162
Missing	246 (9.5)	88 (9.0)	158 (9.8)		
WHO HIV clinical stage at initiation					
Stage 1	2219 (85.6)	845 (86.0)	1374 (85.4)		
Stage 2	198 (7.6)	74 (7.5)	124 (7.7)		
Stage 3	97 (3.7)	41 (4.2)	56 (3.5)	4.483	0.345
Stage 4	8 (0.3)	4 (0.4)	4 (0.2)		
Missing	69 (2.7)	19 (1.9)	50 (3.1)		
ART Regimen at initiation					

TDF/3TC/ DTG	1941 (74.9)	798 (41.1)	1143 (71.1)		
TDF/3TC/ EFV	638 (24.6)	179 (18.2)	459 (28.5)	35.509	**<0.0001***
Others	12 (0.5)	6 (0.6)	6 (0.4)		

Discussion

The aim of this study was to investigate the socio-demographic, behavioural and clinical characteristics of HIV-infected adults initiating antiretroviral therapy (ART) in rural ART clinics within the Centre Region of Cameroon.

Regarding HIV testing modalities in the rural districts of the Centre Region of Cameroon, our study showed that the majority of HIV infected adults initiating ART were diagnosed through community-based testing, accounting for 65.70% of all testing modalities. This underscores the importance of decentralised approaches to HIV testing. This aligns with the global trend advocating for community-based testing as a means to increase accessibility and reach populations that may face barriers in accessing healthcare facilities as evidenced by the World Health Organization's (WHO) Consolidated Guidelines on HIV Testing Services that advocate for a mix of community and facility-based testing to cater for the diverse needs of populations [12]. While the percentage for facility-based testing is lower than community testing, it shows the continued importance of healthcare facilities as hubs for HIV testing services. Studies in South Africa [13] and India [14] have shown the effectiveness of community testing in increasing testing rates among high-risk populations like key populations, emphasising its role in the early detection of HIV. This consistency across different regions emphasises the potential of community testing to address gaps in traditional facility-based testing. In contrast to our findings, a study conducted in urban settings in Kenya [15] reported a higher preference for facility testing due to perceived privacy and the availability of comprehensive services. These discrepancies highlight the importance of tailoring testing strategies to the specific characteristics and preferences of local populations. While community-based testing offers increased accessibility, concerns regarding the quality of counselling, the potential for stigmatisation, and the accuracy of results in non-clinical settings have been raised [16]. A study in Cameroon [17] highlighted the need for careful consideration of confidentiality and privacy issues in community testing settings as concerns that must be addressed to ensure the success of such programs.

Our study equally looked at the demographic characteristics of individuals initiated on antiretroviral therapy in rural ART clinics of the Centre region of Cameroon, providing valuable insights into gender variation in the factors that may influence HIV treatment initiation and outcomes. Overall, more women (62.1%) were initiated on ART than men (37.9%). The mean age at initiation was 38.91 years, with significant variations (p=0.0002*) across gender (mean ages of 39.51 ± 0.28 vs 37.76 ± 0.38 for males and females respectively). More females (34.8%) than males (18.6%) were initiated on ART within the youngest age group of the study (21–30) years (p-value < 0.0001*). This aligns with findings from a nationwide survey in Cameroon [18] which show that a substantial proportion of individuals initiating ART fall within the productive age range which is sexually active and thus more vulnerable. A study in South Africa also found a higher proportion of young adults initiating ART [19] emphasising the need for age-tailored interventions.

Concerning residence, overall, individuals residing more than 5 km from the healthcare facility showed a higher representation (73.7%) compared to those living within 5 km (25.6%). While there was no statically significant gender

difference observed (p = 0.154), this finding emphasises the importance of considering geographic factors in healthcare accessibility. Similar findings in a study conducted in rural areas of South Africa [20] highlight the need for decentralised healthcare services to address disparities in ART initiations related to distances from health facilities. Similarly, a study in urban Cameroon [21] found no significant association between residence and ART initiation.

Marital status displayed significant variation with gender at ART initiation. Notably, individuals who are single and those identified as concubines exhibited higher rates of ART initiation (p< 0.0001*). This is consistent with the findings of a study in Kenya [22], emphasising the role of social support structures in influencing HIV vulnerability and healthcare-seeking behaviour. Educational attainment demonstrated a significant association with gender at ART initiation (p-value = 0.021*), aligning with global evidence that higher education positively influences health-seeking behaviour [18]. Individuals with primary education constituted the majority, while those with university or higher education were comparatively lower. More females than males were among those with no formal education (10.3% vs 8.1%) and those with only primary education (42.3% vs 40.7). This is consistent with the findings of studies in resource-limited settings [23]. The disparities in education levels highlight potential barriers faced by those with lower educational attainment, suggesting the need for targeted educational interventions to improve health-seeking behaviours. Occupation at initiation displayed some variations. Farmers exhibited a higher rate of ART initiation (p-value = 0.005*), possibly due to increased healthcare accessibility in rural farming communities. The role of occupation in healthcare utilisation has been explored [24], presenting the importance of tailoring interventions to specific occupational contexts.

This study also revealed crucial insights into the behavioural and clinical characteristics of HIV infected adults initiating ART in rural ART clinics within the Centre Region of Cameroon. The decision to disclose one's HIV status to a partner is a complex and culturally influenced aspect of HIV care. In our study, a significant proportion of HIV infected adults initiated on ART had not informed their partners of their HIV status (55.4%). This lack of disclosure was more prevalent among females (56.7%) than males (53.2%). The difference reached statistical significance (χ^2 = 9.380, p = 0.009*), highlighting gender-related variations in the disclosure of HIV status to partners. Addressing barriers to disclosure, particularly among females, is crucial for fostering open communication and support within intimate relationships. This finding aligns with studies conducted in Cameroon [25] and other African countries [26], indicating challenges in partner disclosure. The reluctance to disclose may be attributed to fear of stigma, discrimination, or potential relationship strain. Contrastingly, our results also revealed that a substantial number of clients shared their HIV status with family and/or friends (36.1%). This reflects the importance of social support networks in the context of HIV care. Other studies [27, 28] have outlined the positive impact of social support on treatment adherence and psychosocial well-being, potentially leading to improved health outcomes.

The World Health Organization (WHO) HIV clinical staging provides a framework for assessing the progression of HIV infection and determining the appropriate course of treatment. In our study, the majority of individuals started ART at WHO HIV clinical Stage 1 (85.6%) indicative of early HIV infection, with no significant gender-related variation. This trend is consistent with the global shift toward initiating ART at earlier stages to improve health outcomes and prevent disease progression [29]. However, our findings also revealed that a considerable

proportion of individuals-initiated ART at more advanced stages (Stage 2, 3, or 4), emphasizing the ongoing challenges in timely HIV diagnosis and linkage to care. A study highlights the importance of addressing barriers to early HIV diagnosis and treatment initiation, including limited access to healthcare services and HIV testing [30]. The choice of ART regimens plays a crucial role in the effectiveness of HIV treatment. Our study revealed a significant difference in prescription patterns between males and females (χ^2 = 35.509, p < 0.0001*). The majority of participants (74.9%) initiated treatment with TDF/3TC/DTG, with a higher prevalence among females (71.1%) compared to males (41.1%). This reflects the evolving landscape of HIV treatment guidelines globally [31] and in Cameroon in particular where the National guideline for HIV management recommends TDF/3TC/DTG regimen for first-line option for HIV infected adults. Conversely, a small proportion of individuals were initiated on TDF/3TC/EFV regimen (24.6%), which has been a longstanding first-line option in Cameroon. The observed variance could be attributed to factors such as drug availability, contra-indications in certain cases and evolving national treatment guidelines [32]. These findings underscore potential gender-based disparities in treatment choices and highlight the importance of adhering to the National Guidelines for HIV management in Cameroon and tailoring treatment regimens to individual needs. This regimen (TDF/3TC/DTG) has been associated with better tolerability and efficacy, contributing to improved adherence and virological suppression [33, 34]).

While this study provides valuable insights into the Socio-demographic, behavioural and clinical characteristics of individuals initiating HIV care in the rural setting of Cameroon, we acknowledge that our study is not without limitations. The study was conducted within a specific geographic area, targeting a specific population sub-group and the findings may not be representative of broader populations. Also, the presence of missing data in some of the variables constitutes a potential for bias in the analysis. Future research with a more diverse sample, longitudinal design, and a broader range of variables can further enhance our understanding of the complex factors influencing HIV care initiation.

Conclusion

This study was meant to investigate the characteristics of HIV-infected adults initiating antiretroviral therapy (ART) in rural ART clinics within the Centre Region of Cameroon. The findings from the study shows the complexity of demographic factors influencing ART initiation and contribute to our understanding of the gender-related variations in disclosure practices and clinical staging at the initiation of HIV care. The gender-specific patterns observed emphasize the importance of tailored interventions to address the unique challenges faced by both males and females during this critical phase of care. Further research is warranted to explore the underlying factors influencing disclosure behaviours and to enhance our understanding of the behavioural and clinical complexities associated with early HIV care initiation.

Conflict of Interest

The authors declare that they have no conflicts of interest for this research work.

Acknowledgements

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