Access to Anti-Retroviral Therapy and Post Antitherapy Sexual Behaviour among HIV+ Persons in Ondo State

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Abstract

Since the discovery of HIV/AIDS, its morbidity and mortality in Nigeria has risen proportionately, posing significant threats to population health and survival. The increased pressures on the existing health infrastructure and financial burden have negative consequences on the social and economic development of the nation. Several surveys and available records indicate that the main route of over 65% infection with HIV is unprotected and illicit sexual activities, making the sexually active segment the Most at Risk Population (MARPS). Voluntary Counseling and Testing (VCT) and administration of Anti-Retroviral to boost the immunity of PLWH offers a relief in the management of HIV, Research on post VCT and ART sexual activities are relatively rare in Nigeria. The study examined HIV+ Status history and access to ART among PLWHIV in Ondo State, Nigeria. Data were obtained using a formal questionnaire, from a sample 315 PLWHIV accessing ART in the selected health facilities in Ikare Akoko, Ondo, Owo, Ilaje, Akure and Okitipupa. The instrument was divided into socio-demographic characteristics, HIV+ Status history, Access to ART and Post ART Sexual behaviour. Data were analyzed using SPSS at the univariate and bivariate levels. Findings revealed that about 70% confirmed their HIV+ Status ≥ 3 years prior to the survey, the mean period in years of access to ART was 2.2 years, about 90% ever engaged in unprotected sexual intercourse and the mean number of sexual partners was 2. Some social, political and economic factors determined ease of access to ART. The need to remove all social and economic impediments to access to ART services and intensified post ART counseling will address the increase in secondary infection with HIV among PLWH.

Keywords: *Sexuality, Infections, Behavior, Anti-retroviral & Counseling.*

Introduction

Some of the biggest health problems threatening human existence are the morbidity and mortality arising from the deadly HIV infection. The global and regional statistics show a high prevalence in most parts of the sub-Saharan African countries including Nigeria. Although the HIV prevalence rate of less than 5% in Nigeria is relatively lower in countries such as South Africa, Lesotho, Uganda, Kenya and Zambia, the huge size of her population of over 180 million people make the significant difference in the actual number of persons infected with HIV (UNICEF, 2016). Data from the Nigeria AIDS Agency showed that about 174,253 people have died of complications arising from the disease and that of the 3.5million people living with AIDS, 1.72million are females, also that females of reproductive age recorded the highest share.

Corroborating the above data, estimates from the Joint United Nations AIDS Programme (UNAIDS, 2015) showed that not less than 3.5million Nigerians were living with HIV as at end of 2014 with variations across States and geo-political zones. Statistics from the National AIDS and Reproductive Health Survey (2012) indicate that Ondo State had 2.3% prevalence rate characterized by a mixed epidemic coupled with transmission dynamics dependent on both the Key Most at Risks Population (MARPs) and a strong unbroken behavioral pattern in the population.

In Ondo State, as at 2013, an estimated 125,622 people were believed to be living positive. Access to Voluntary Counseling and Testing and Anti-Retroviral Treatment (ART) in different Centres located across the State is relatively unstable and is mostly determined by social, political and economic considerations. As a treatment option, ART remains the best option for the PLWH, linking issues of acceptability.

Mostashari Farzad; Riley, Elise; Selwyn, Peter A.; Altice, Frederick L. (1998) examined attitudinal and demographic correlates of antiretroviral acceptance and adherence among incarcerated HIV-infected women in a structured interviews conducted with 102 HIV-infected female prisoners eligible for antiretroviral therapy and found that three quarters of the women were currently taking antiretroviral agents, of whom 62% were adherent to therapy. Satisfaction was very high with the HIV care offered at the prison; 67% had been first offered antiretroviral agents and that the acceptance of therapy was associated with trust in the medication's efficacy and safety.

A related study by Frederick Altice, Farzad Mostashari, Gerald Friedland (2001) on acceptance of Antiretroviral therapy (ART), findings revealed that socially marginalized individuals with HIV infection, particularly injection drug users (IDUs), have received less ART and derived less benefit than others with little knowledge about the therapeutic process necessary to promote acceptance of and adherence to ART among marginalized HIV-infected populations. In addition, acceptance was associated with trust in physician and trust in HIV medications knowledge of the side effects, social isolation and complexity of the antiretroviral regimen were associated with decreased adherence.

Some of the barriers to the use of Antiretroviral therapy identified by a study by Laura K. Murray , Katherine Semrau , Ellen McCurley , Donald M. Thea , Nancy Scott , Mwiya Mwiya (2009) are consistent with factors cited in the existing adherence literature from both developed and developing nations such as side effects, hunger and stigma. One major theme was unfamiliarity with the implications of having a chronic, potentially deadly disease, complicated effect of ART on interpersonal relationship, particularly between husbands and wives, the presence of depression and hopelessness, and lack of accurate information.

An exploratory and qualitative research project conducted among 25 self-identified traditional healers between June and August of 2006 in the Lukhanji District of South Africa, Shuster JM, Sterk CE, Frew PM, del Rio C. (2009) revealed a range of motivational factors that were believed to promote a deeper acceptance of and support for ART to include cultural consistencies between traditional and biomedical medicine, education, legal and financial incentives with a recommendation that such factors need to be incorporated into future HIV/AIDS treatment programs.

A study by Mukesh Shukla, Monica Agarwal, Jai Vir Singh, Anil Kumar Tripathi,[1] Anand Kumar Srivastava, and Vijay Kumar Singh (2016) assessed the prevalence and the predictors of high-risk sexual behavior among people living with HIV/AIDS (PLHA) in a hospital-based cross-sectional study was conducted at antiretroviral therapy centers of two tertiary care hospitals in Lucknow. They found a prevalence of high-risk sexual behavior was 24.5%, multiple sexual partners among 67.3% whereas about 46.9% were engaged in unprotected sex. The authors concluded that specific intervention addressing alcohol consumption and encouragement of spouse and family support should be integrated in the routine HIV/AIDS care and treatment apart from HIV transmission and prevention knowledge.

In a longitudinal qualitative interviews with forty people starting ART with adherence education and counseling support from The AIDS Support Organisation (TASO), Joyce Wamoyi, Martin Mbonye, Janet Seeley, Josephine Birungi and Shabbar Jaffar (2011) found that Sexual desire changed over time with many reporting diminished desire at 3 and 6 months on ART compared to 18 and 30 months of use. The reasons for remaining abstinent included fear of super infection or infecting others, fear that engaging in sex would awaken the virus and weaken them and a desire to adhere to the counsellors' health advice to remain abstinent.

The motivations for resumption of sexual activity were: for companionship, to obtain material support, social norms around marriage, desire to bear children as well as to satisfy

sexual desires. They recommended that People taking ART require support so they feel comfortable to disclose their HIV status to sexual partners.

The National Agency for the Control of AIDS in its comprehensive National Strategic Framework on HIV/AIDS intended to reach 80 percent of sexually active adults and 80 percent of Most At Risk Populations with HIV Counseling and testing followed by ART treatment by 2020, ensure 80 percent of eligible adults and 100 percent of eligible PLWH are receiving ART by 2020, and to improve across to quality care and support service to at least 50 percent of people living with HIV.

Despite the increased efforts to curtailing the spread and containing the infection, recent statistics shows that in Ondo State, the new infection with HIV is has risen, raising concerns about the acceptability and accessibility to the ART treatment option possibility of achieving the target of the National Strategic Framework on HIV/AIDS. Despite the increase in sexual activities among PLWA, the efficacy of VCT may have been challenged by the incidence of new infections with HIV while the proportion of health facilities for its management is relatively scarce. The above problematic scenario occasioned the need to ask some basic questions concerning ART. The study is intended to examine.

1. HIV+ Status History of the PLWH accessing ART in the selected treatment centres.
2. Their access to ART in the selected treatment centres.
3. Sexual behaviour of PLWH post Anti-retroviral Therapy.

Methods

The study population consist all the People Living with HIV (PLWH) and People Living with AIDS (PLWA) in all the local council areas of Ondo State, but with specific samples drawn from a percent of them accessing VCT and ART in designated health facilities. The study relied on both the primary and secondary sources for relevant data in addressing the research questions. Primary data were obtained from the 315 PLWH & PLWA accessing VCT and ART from identified health facilities in Ondo State as indicate in Table A.

Table A. Sample selection of VCT & ART treatment centres and PLWH

S/N	Community	Health Facility	Number of Respondents (N=315)
1	Ikare	General Hospital	055
2	Ita-ogbolu	General Hospital	050
3	Ondo	General Hospital	052
4	Owo	Federal Medical Centre	054
5	Okitipupa	General Hospital	056
6	Igbokoda	General Hospital	048

Source: Author's compilation, 2018

Multi-stage sampling technique was adopted in obtaining primary data. Using Systematic Sampling, six local council areas, one from each of the ethnic sub-dialects, were selected from where purposively, six health facilities offering VCT & ATR services were selected. Simple random sampling technique was used to select the required number of PLWH who responded to the questionnaires distributed. The instrument, a structured questionnaire contains demographic characteristics, Sexuality, knowledge and awareness about HIV/AIDS, HIV status, availability of and access to care and support by PLWA, socio-economic issues. The instrument was pre-tested with smaller sample to test its validity. The reliability co-efficient of 0.76 was achieved at 0.05 level of significance with the use of Pearson Product Moment Correlation Coefficient. Data were analyzed using SPSS 17, at univariate and bivariate levels are presented in tables for clarity.

This study is a bio-social survey which does not involve any physical risks as no medical tests were taken. However, written inform consent was attached with the questionnaire and endorsed by all the participants for voluntary participation in the study.

Results and discussions

Sample characteristics

This section presents available data on selected characteristics of participants. The selected characteristics are age, sex, sexual orientation, marital status, current state of marriage, number of children, and number of years of discovery of HIV status. The data is presented in table 1.

Age, sex, marital status & current state of marriage

Table 1 presents data on the following social characteristics; age, sex, marital status and current state of marriage. Data as presented in table1 show the following percent of each age classification: 15-24 years (4.4%); 25-34 years (13.3%); 35-44 years (35.6%); 45-54 years (33.3%); 55-64 years (6.7%); 65&above (6.7%) respectively. Generally, about half (53.3%) were between 15-44 years of reproductive age while the remaining 46.7 were between 45 years and above. However, the mean age of the respondents was found at 43.5 years. Data on the gender distribution of the respondents show that higher proportions (68.9%) were females while 31.1% were male. The data suggest that more HIV+ females participated in this study than the males.

Marital status is a significant variable in HIV studies because of its implication on the health status of the spouse and other members of the family which are related by blood. In this study, almost all the respondents (97.8%) were married while the remaining 2.2% never married. Marriage is relatively stable among the respondents in the study locations. A little above three-quarter (75.6%) are currently living with spouse (8.9%), divorced (2.2%) while the remaining 11.1% were either widows or widowers. This report is significant because the stability of marriage institution among the participants has far reaching implications on the infection and further spread of the virus among other members of the family.

Participants reproductive behaviour

Fertility, the reproductive performance of men and women in a population is measured with the responses on the number of children a family has, at a point in time. Data as presented in table 2 shows that those who reportedly never married also had children probably out of wedlock. They signified to have given to children in a pre-marriage relationship and subsequently could not deny having children. Details of the responses presented in the table show that reproductive performance of the participants is relatively significant. Specifically, those who had 1-2 children (33.3%), 3-4 (children) (42.2%), 5-6 children (17.8%), 7 years and above (6.7%). Summarily, over three-quarter of the participants had between 1-4 children while the remaining one –quarter had 5 children &above. The mean number of children respondents reported was found at 4 which is a reflection of the reproductive capacities of spouses in the study locations. Data on fertility behaviour was cross-tabulated with gender to determine the number of children specific gender reported to unveil gender disparities. Though in a patriarchal society where men determine the number of children women have, women participants in this study reported specifically the number of live child births and the surviving ones.

Data presented above shows that of all the 105 respondents who had 1 – 2 children, 33.3% were males while 66.7% were females, 31.6% of the 133 respondents who had 3 – 4 children were males while 68.4% were females, three-quarter of the participants who reportedly have 5 – 6 children were females, leaving the remaining one-quarter were males and finally, those 66.7% of the 21 participants who had a minimum of 7 children were females while 33.3% were males. Data trend shows that women reported higher number of children than men participants pointing to the fact that fertility behaviour was higher among females than male participants. The mean number of children for male is 4 while it was found at 5 for female participants. The above presentation is presented in the table 2.

Objective 1. To examine the HIV+ status history

To achieve objective 1, participants were asked to indicate the years in classification, that they initially confirmed their HIV+ status, actual year of HIV infection and possible sources of HIV infection. The responses on the above could assist to determine HIV+ status history of the participants.

HIV+ status history

As an indicator of epidemiological trend, disease progress and a measure of response to treatment, respondents were asked to indicate the number of years they have been confirmed as HIV+. Findings show that 75.6% were infected between 1-4 years prior to this survey. Further breakdown of the data is shown below; 1-2 years (33.3%); 3-4 years (42.2%); 5-6 years (13.3%); 7 & above years (11.2%) respectively. The mean number of years, participants discovered their HIV+ status was 2.4 years. This indicates that it took an average of about 28 months before an individual was tested and confirmed HIV+. This could have a far-reaching implication on the experience of complications arising from the infection most especially when the onset of the treatment is delayed. The above is shown in table 3.

Data in table 4 probes into the years of HIV+ status was determined by question requesting them to indicate the specific years of discovery and confirmation of HIV+ status and actual year of infection. Specifically, data on actual year of infection reveals that those who discovered the infection between 1-2 years (31.1%); 3-4 years (40%); 5-6 years (11.1%) and 7 & above years (17.8%). It can be inferred from the data that most respondents reported their HIV status same year they were infected, though some with variations. The variations reflect in the classification below/with the differentials of 2.2% in the age classifications. The 2.2% differentials translate to actual numbers of seven people in each of the cohorts between the years a patient discovered his/her HIV status and the actual year of infection with the virus.

The differentials reported above could represent a significant period between infection and the period the case is presented for treatment in any of the health treatment facilities and could also influence the degrees to which infection could have damaged certain body organs and the extent of progress of treatment in any facility.

Table 5 shows the sources of infection. Source of infection with a virus is one of the relevant variables in the treatment of the diseases and the monitoring of its spread as a result primary or secondary infection. Aside from the fact that this assists epidemiologists to trace the disease host and its location, it also guides in enlisting the possible infection chain with a view to adapting appropriate strategies for curbing the spread and manage the infected patients in the population. Data presented in the table 5 presents responses in percent of various sources of infection. An overwhelming majority (71.1%) of the total respondents got the infection through unprotected sexual intercourse, 22.2% were infected through unsterilized sharp objects, while just 6.7% got the disease from transfusion of unscreened blood transfused into their body system.

Objective 2. To examine their access to anti-retroviral therapy

Access to anti-retroviral therapy

Anti-retroviral drugs provide the only therapy for the management of HIV positive patients, immediately after voluntary counseling and testing. Several reports have indicated different levels of access to the therapy. The years after infection, which the HIV positive person access the Anti-retroviral therapy may go a long way to determine the efficiency of treatment. Table 6 provides data on the period of access to ART.

Period of accessing ART

In this survey, participants were asked to indicate in years, the years they began to access to ART. Data showed that 42.2% of the total respondents accessed ART between 1-2 years of infection while 33.3% had access to ART between 3-4 years while 15.6% had access between 5-6 years and the remaining 8.9% accessed ART 7 years and above. When this data was cross tabulated with the responses on years of HIV positive status, the data discussed below are presented in Table 7.

The Chi-square value of 532.86 between the two variables is highly significant at 0.05 level. This shows that there is a significant relationship between years of contact of HIV and the period (in years) of accessing ART. Of all the respondents, 42 percent had access to ART between 1 – 2 years of infection with the virus while 105 respondents representing 33.3% had access to 3 – 4 years of infection.

Objective 3. To examine sexual behavior of PLWH accessing anti-retroviral therapy in the selected treatment centres

Respondents were placed in on various key sexual behavioural indicators and the data obtained are discussed below.

Ever involved in unprotected sexual intercourse

As shown in Table 8, on whether respondents have ever engaged in any unprotected sexual intercourse, since it has been reported as the main source of infection with HIV in Nigeria, findings show that 294 respondents representing 93.3% have been involved in unprotected sexual engagement while only 6.7% did not. The cross tabulation of this variable with age classification was carried out to determine the exact percent per specific age cohort, this is intended to assist in ascertaining the proportion and the possibility of infection. This is demonstrated in the table below.

Age at first sexual intercourse

The age at the first initiation of the sexual intercourse is one of the major determinants of sex-related behavioral issues in a population, such as sexual experience, frequency of sexual and intended number of sexual partners. Data presented in table 9 indicates that 77.8% of the total respondents engaged in first sexual intercourse between 15-24 years, one-fifth i.e. 20% engaged while between 25-34 years while the remaining 2.2% had first sexual experience between 35-44 years. The mean age at first sexual intercourse was found at 17.4 years. Previous researches in different parts of Nigeria have reported different ages at first intercourse per region.

Number of sexual partners

One of the risk factors of infection with any STIs including HIV/AIDS is the number of sexual partners engaged in risky sexual activities. Respondents were asked to indicate number of sexual partners ever engaged in sex. The data presented in the table 10 shows that a significant percent (84.4%) had between 1-2 sexual partners while 11.2% had between 3-4 sexual partners. The remaining 4.4% had between 5-6 partners. A colossal review of the data above shows that 49 respondents representing 15.6% engaged in multiple sexual partnerships, a risk factor of HIV/AIDS infection.

Multiple sexual partnerships are strong factors in sexual networking among the general population. The higher the number of sexual partners, the higher the risks of contraction of HIV/AIDS most especially if the sexual partners

do not consistently and persistently used condom. Further investigation into how frequent respondents engaged in sexual intercourse is presented in the second panel of the table show that significantly, fourth-fifth, i.e. 80% of the total respondents engaged in 1-2 nights of sex per week while 15.6% engaged in 3-4 nights of sexual activities while only 14 respondents representing 4.4% engaged in 5-6 nights of sexual activities per week. The mean number of sexual partners among the respondents is approximately 2.

Currently using condoms and its frequency

Table 11 presents data on condom use. Condom use remains a reliable method of preventing sexual contact of HIV/AIDS among human population. Though the participants in this study are people living with HIV/AIDS, they were asked to indicate if they still used condom during sexual intercourse. Condom use is also very relevant among this population because there is a possibility of engaging in sexual intercourse with the uninfected proportion of the population, which may trigger continuous secondary infection.

Data presented in the table above show that about half (53.3%) are currently using condoms during sexual intercourse to prevent the possibility of infections with other forms of STIs or spreading HIV to the uninfected proportion of the population. The proportion of currently using condom is relatively low considering HIV+ status, prompting people into a higher risk of HIV infection. On the frequency of condom use per week, among the respondents currently using condoms, the second panel of the table shows that 133 respondents representing 79.2% used condom in 1-2 sexual engagements per week while the remaining 20.8% wear condoms during 3-4 sexual engagements per week. This proportion of the sample seems to be safer with the high use of condoms during sexual engagements per week.

Common forms of sexual engagement

Generally, there are several forms of engagement with sexual intercourse among the human population as revealed in Table 12. Respondents were asked to indicate the exact form sexual activity engaged during sex. Data presented in table 13 above shows that among the selected sample, there are traditionally, two

forms sexual engagements which are rampant (oral and vagina). About fourth-fifth (82.2%) engaged in the traditional vagina sexual intercourse, only 4.4% engaged in oral sex only while the remaining 13.3% engaged in a combination of oral and vagina sex.

However, scientific research has confirmed that all these forms of sexual engagements can trigger the infection with HIV/AIDS. While only the vagina sex can be protected, using male or female condom, oral sex offers direct contact with body fluids which put the sexual actors in the risk of infections with HIV and other sexually transmitted infections.

New sexual partnership

A risky factor in sexually transmitted HIV is networking, facilitating the possibility of initiating sex with new sexual partners. Data reported earlier indicate that respondents have between 1-6 sexual partners. Participants were asked to indicate if they changed sexual partners one year prior to this survey. The data is presented in the table below.

In the table 13, data shows that about one-third (31.1%) changed sexual partners in the previous one year, this category of respondents reported to have had sexual engagements with at least three new sexual partners while the remaining 217 respondents representing 68.9% had not changed their sexual partners in the last one year.

Bivariate analysis

In this section, one independent variable that is relevant to the research objectives is cross tabulated with other dependent variables to determine the nature of relationship existing between them. In the first category, year of confirmation of HIV+ status is the independent variable while number of children, actual year of HIV+ status and access to ART are dependent variables, which are tabularized in Table 14.

Years of confirmation of HIV status / reproductive behaviour

This is an attempt to juxtapose the data on the number of children respondents had, with the number of years they were confirmed HIV+. As presented, those who confirmed their status between 1-2 years were 105 in total. Findings show that among them, 26.7% had between 1-2 children, 21.1% had 3-4 children among others.

Among those who had 3-4 children: 1-2 years (21%), 3-4 years (47.4%), 5-6 years (11.1%) and 7 years and above (21.1%). 5-6 children: 1-2 (75%), 3-4 (12.5%), 5-6 (12.5%). 7 years and above: 1-2 (33.3%), 3-4 (33.3%) 5-6: 1-2 (33.3%) 3-4 (33.3%), 5-6 (33.4%).

Years of confirmation of HIV+ status/actual year of HIV+ status

There are disparities between the period of HIV infection and actual period the status was discovered and confirmed through a scientific test. Data obtained show that there seems to be some reported differentials between the period of infection and actual HIV test, people do not present cases of illness at any health facility until it becomes complicated. The data in the table further shows that among those who confirmed their HIV+ status between 1-2 years, 86.7% actually contacted HIV between 1-2 years, suggesting that these participants might have reported for HIV test at the period of the infection, however, the remaining 13.3% had previously contact the virus about 7 years.

In this case the minimum number of years between infection and confirmation of HIV status is a minimum of 5 years. Among those discovered their HIV+ status between 3-4 years, 16.7% got the infection in almost same number of years (3-4), 15.2% got the infection between 5-6 years. There is a direct relationship between those who discovered their HIV status 7 years and above and the period of actual infection.

Discovery of HIV status / period of initial access to antiretroviral therapy

The period between the confirmation of HIV status and access to ART is significant in determining the extent and effect of infection with the virus, since ART remains, for now the only treatment option. When cases are presented early for treatment, the opportunistic infection presents minimal effect on the patient.

A cross-tabulation of the two variables presents the data which indicate that among those who confirmed their status between 1-2 years of infection, all accessed ART between 1-2 years of infection. In addition, those who reportedly confirmed their status between 3-4 years, 15.8% had access to ART between 1-2 years, 79% between 3-4years while the remaining accessed ART 5-6 years later. The remaining data showed that those who

confirmed their HIV+ status between 5-6 years, 83.3% registered for ART between 5-6 years, while the remaining 16.7% registered and access ART 7 years and above.

Years of discovery/nature of HIV test

Data on years of discovery of HIV+ status were cross tabulated with the actual place where the test was carried out. Findings presented in the table shows that among those who discovered their HIV+ status between 1-2 years; 93.7% were tested involuntarily in the health facility when they presented an illness for treatment while the remaining 6.3% went for voluntary HIV test in modern health outlet with testing kits. Further analysis shows that among those who discovered their HIV+ status between 3-4 years, 89.5% discovered during an illness treatment while 10.5% went for voluntary HIV test.

There is a significant relationship between voluntary and involuntary HIV test among those who discovered their status between 5-6 years in the proportion of 1:1 ratio. Among those who discovered their HIV+ status 7 years and above, 88% did involuntary test while the remaining 20% did a voluntary HIV test. Generally, the proportion of the participants who were tested involuntarily were about 85% of all those who participated in the study. This interprets to mean that most people do not normally go for HIV test except when they present an illness that requires medical attention. This may be risky for seeking behaviour. The data discussed above are presented in table 15.

Conclusion and recommendations

It is an undisputable fact that the global scientific efforts at finding vaccines that will cure the deadly HIV are being intensified by all the stake holders in public health. The discovery of Antiretroviral treatment intended to offer a boost to the immunity of the people living with the virus is a progress appreciated by all and sundry.

The high level of awareness about the efficacy of this treatment option by the participants manifested with the corresponding high level of demand for the product, but not without some challenges and obstacles. The report that those who confirmed their HIV+ status between 1 - 2 years also patronized the treatment within same range of time as shown in

table 3 & 6 indicates their willingness and preference for the Antiretroviral drug option. It is on the basis of the findings of this study that the following recommendations are made.

1. More Antiretroviral treatment centres should be established in the rural areas to take care of the rural populace living with the virus.
2. The drug supply should be increased towards meeting the demand for the product.
3. Even if any expenses are to be incurred to access ART, the cost should be minimal and affordable to the intending users. Prices can be subsidized if necessary.
4. All social and political bottlenecks in accessing the drug should be removed through peoples' friendly policies that will provide direct access.

Appendix 1

Table 1. Sample characteristics

Variables	Frequency (N=315)	Percent
Age		
15 – 24	14	4.4
25 – 34	42	13.3
35 – 44	112	35.6
45 – 54	105	33.3
55 – 64	21	6.7
65 & above	21	6.7
Sex		
Male	98	31.1
Female	217	68.9
Sexual Orientation		
Straight	308	97.8
Transgender	7	2.2
Marital Status		
Married	308	97.8
Single	7	2.2
Current Status of marriage		
.00	7	2.2
With spouse	238	75.6
Separated	28	8.9
Divorced	7	2.2
Widowed	35	11.1
Number of Children		
1 – 2	105	33.3
3 – 4	133	42.2
5 – 6	56	17.8
7 & above	21	6.7

Source: Author's field survey, 2018

Table 2. Reproductive behaviour per gender

Gender	Number of children			
	1 – 2	3 – 4	5 – 6	7 & above
	F %	F %	F %	F %
Male	35 33.3	42 31.6	14 25.0	07 33.3
Female	70 66.7	91 68.4	42 75.0	14 66.7
Total	105 100.0	133 100.0	56 100.0	21 100.0

Source: Author's field survey, 2018

Table 3. Years of initial confirmation of HIV+ status

Years of Confirmation	Frequency	Percent
1 – 2	105	33.3
3 – 4	133	42.2
5 – 6	42	13.3
7 & above	35	11.2
Total	315	100.0

The mean years of confirmation = 3.54 years

Source: Author's field survey, 2018

Table 4. Actual year of HIV infection

Actual Years of HIV Infection	Frequency	Percent
1 – 2	98	31.1
3 – 4	126	40.0
5 – 6	35	11.1
7 & above	56	17.8
Total	315	100.5

The mean actual year of infection = 3.81 years

Source: Author's field survey, 2018

Sources of HIV infection

Table 5. Sources of HIV infection

Sources	Frequency	Percent
Unprotected sex	77	24.4
Blood transfusion	21	6.7
infected sharp object	70	22.2
Others	147	46.7
Total	315	100.0

Source: Author's field survey, 2018

Table 6. Access to anti-retroviral therapy

Access (in years)	Frequency	Percent
1 – 2	133	42.2
3 – 4	105	33.3
5 – 6	49	15.6
7 & above	28	8.9
Total	315	100.0

Mean period in years of access to ART = 2.2 years approximately 27 months

Source: Author's field survey, 2018

Years of HIV+ status / actual year of access to ART

Table 7. Years of HIV+ status / actual year of access to ART

Year of Infection with HIV	Actual Years of Access to ART				
	1 – 2	3 – 4	- 6	7 & above	Total
	F %	F %	F %	F %	F %
1 – 2	91 68.4	07 6.7	00 00.0	00 00.0	98 31.1
3 – 4	21 15.8	98 93.3	07 14.3	00 00.0	126 40.0
5 – 6	00 00.0	00 00.0	35 71.4	00 00.0	35 11.1
7 & above	21 15.8	00 00.0	07 14.3	28 100.0	56 17.8
Total	133 100.0	105 100.0	49 100.0	133 100.0	315 100.0

Source: Author's field survey, 2018

Table 8. Age /ever engaged in sexual intercourse

Age in years	Ever engaged in Sexual Intercourse		
	Yes	No	Total
	F %	F %	F %
15 – 24	14 04.8	00 00 .0	14 04.4
25 – 34	42 14.3	00 00 .0	42 13.3
35 – 44	98 33.3	14 66.7	112 35.6
45 – 54	98 33.3	07 33.3	105 33.3
55 – 64	21 07.1	00 00 .0	21 06.7
65 & above	21 07.1	00 00 .0	21 06.7
Total	294 100.0	21 100.0	49 100.0

Source: Author's field survey, 2018

Table 9. Age at first sexual intercourse

Responses	Frequency	Percent
15 – 24	245	77.8
25 – 34	63	20.0
35 – 44	7	2.2
Total	315	100.0

Source: Author's field survey, 2018

Table 10. Number of sexual partner / frequencies of sex per week

Number of Sexual Partner	Frequency (N = 315)	Percent
1 – 2	266	84.4
3 – 4	35	11.2
5 – 6	14	4.4
Frequency of Sex per week		
1 – 2	252	80.0
3 – 4	49	15.6
5 – 6	14	4.4
Total	315	100.0

Mean number of sexual partners = 1.9, Mean number of sexes per week = 2

Source: Author's field survey, 2018

Table 11. Currently using condoms / its frequency per week

Responses	Frequency	Percent
Yes	168	53.3
No	147	46.7
Total	315	100.0
Frequency of condom use		
1 – 2	133	79.2
3 – 4	58	20.8
Total	168	100.0

Mean number of times participants used condoms weekly = 3.5

Source: Author's field survey, 2018

Table 12. Common forms of sexual engagement

Responses	Frequency	Percent
Oral Sex	14	4.4
Vagina	259	82.2
All of the above	42	13.3
Total	315	100.0

Source: Author's field survey, 2018

Table 13. New sexual partnership

Responses	Frequency	Percent
New sexual partnership in the previous one year		
Yes	98	31.1
No	217	68.9
Total	315	100.0
Number of new sexual partner		
1 – 2	21	21.4
3 – 4	77	78.6
Total	98	100.0

Mean number of sexual partners = 3.1

Source: Author's field survey, 2018

Table 14. Year of confirmation of HIV+ status/number of children/actual year of HIV+ status/access to ART

Year of Confirmation of HIV+ Status	Number of children				
	1 – 2	**3 – 4**	**5 – 6**	**7 & above**	**Total**
	F %	**F %**	**F %**	**F %**	**F %**
1 – 2	28 26.7	28 21.1	42 75.0	07 33.4	105 100.0
3 – 4	56 53.3	63 47.4	07 12.5	07 33.3	133 100.0
5 – 6	14 13.3	14 11.1	07 12.5	07 33.3	42 100.0
7 years & above	07 06.7	28 21.4	00 00.0	00 00.0	35 100.0
Actual year of HIV+ Status					
1 – 2	91 86.7	00 00.0	00 00.0	14 33.3	105 100.0
3 – 4	00 00.0	119 89.5	07 15.2	07 05.3	133 100.0
5 – 6	00 00.0	00 00.0	35 83.3	00 00.0	42 100.0
7 years & above	00 00.0	00 00.0	00 00.0	35 100.0	35 100.0
Year of initial access to ART					
1 – 2	105 100.0	00 00.0	00 00.0	00 00.0	105 100.0
3 – 4	21 15.8	105 79.0	07 05.2	00 00.0	133 100.0

| 5 – 6 | 00 00.0 | 00 00.0 | 35 83.3 | 07 16.7 | 42 100.0 |
| 7 years & above | 00 00.0 | 00 00.0 | 07 20.0 | 28 80.0 | 35 100.0 |

Source: Author's field survey, 2018

Table 15. Year of confirmation of HIV+ status/nature of HIV test

Year of Confirmation of HIV+ Status	Nature of HIV Test		
	Involuntary	Voluntary	Total
	F %	F %	F %
1 – 2	98 93.7	07 6.3	105 100.0
3 – 4	119 89.5	14 10.5	133 100.0
5 – 6	21 50.0	21 50.0	42 100.0
7 years & above	28 80.0	07 20.0	35 100.0

Source: Author's field survey, 2018

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