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***Research Article***

# Determinants of Contraceptive Utilization Among HIV Positive Women Receiving Anti Retroviral Therapy (Art) In North-West Region, Nigeria

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## Abstract

Contraception helps to prevent unplanned pregnancies among human immune virus positive women. The Utilization of contraceptive among HIV positive women is low in Nigeria, a country with high rates of HIV infected children from maternal to child transmission. This study assessed the determinants of choice and utilization of contraceptives among HIV Positive women receiving Anti-Retroviral Therapy (ART) at General Hospital Daura, Katsina State. Using a cross-sectional study design with quantitative method of data collection, random and purposive sampling techniques were employed to select respondents of the study respectively. An adapted structured questionnaire was used to collect data from 186 women who had been on ART for at least 3 months prior to the study. The study revealed a contraceptive prevalence rate of 37.6% among current users and 54.3% among those who ever used. Pills was the commonest method used (55.7%) and Child spacing (76.1%) was the main reason for the use of contraceptive. Marital status, parity and access to preferred method were found to be significant determinants of contraceptive use. Odds of using contraceptives were twenty-nine times higher among married women compared to unmarried women (adjusted OR 29.07, 95% CI: 3.54 –239.03, p=0.002). Primiparous respondents were seven times more likely to use contraceptives when compared to the nulliparous respondents (adjusted OR 7.42, 95% CI: 2.68 – 20.58, p= 0.002). Additionally, odds of contraceptive use were 76% lower among women who didn't have access to their preferred method compared to those who did (adjusted OR 0.24, 95% CI: 0.07 –0.83, p=0.02). The study revealed that the utilisation of contraception was low and child spacing was the main determinants of contraceptive uptake. Therefore, there is a need to strengthen the integration of family planning service with HIV care and support services.

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# 1. Introduction

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) remains one of the most important world's public health challenges, particularly in low- and middle-income countries (LMICs), [1]. An estimated 33.2 million (31.4 million – 35.3 million) people are living with HIV/AIDS worldwide with 2.5 million of them from sub-Saharan Africa [2]. The face of the HIV/AIDS epidemic has changed dramatically since its emergence in the 1980s. Far from its origins as an illness of homosexual men, HIV/AIDS is increasingly affecting women around the world: In sub-Saharan Africa, three in four new infections are among girls aged 15–19 years and young women aged 15–24 years are twice as likely to be living with HIV than men [2] The United Nations joint project on AIDS [3] report states that, 36.7 million [30.8 million–42.9 million] people globally were living with HIV in 2016 ,1.8 million [1.6 million–2.1 million] people became newly infected with HIV in 2016, 1 million [830 000–1.2 million] people died from AIDS-related illnesses in 2016, 76.1 million [65.2 million–88.0 million] people have become infected with HIV since the start of the epidemic ,while 35.0 million [28.9 million–41.5 million] people have died from AIDS-related illnesses since the start of the epidemic [3]. Also seventy percent of new cases of HIV infection still occur in sub-Saharan African countries [2].

In Sub- Saharan Africa, women living with HIV make up 59% of the adult population living with the infection [3]. Paradoxically, many of these HIV positive women live in sub-Saharan Africa where the total fertility rate is high and access to contraceptive services and contraceptive prevalence rates are low [4]. Nigeria has a total fertility rate of 5.9 births per women, yet only 8% of married women use modern contraceptive device. Suggesting that HIV positive women in these regions are likely to have a low contraceptive prevalence rate and a high prevalence of unwanted pregnancies [4]. Effective linkages between the sexual and reproductive health and the HIV fields are essential to ensuring the reproductive rights of people living with HIV. All women, including those with HIV, have the right "to decide freely and responsibly on the number and spacing of their children and rights [5]. The sexual and reproductive decisions faced by women with HIV involve their desire for pregnancy, their contraceptive practices, their choices about an unintended pregnancy, and their prenatal and postnatal options to reduce perinatal transmission of HIV [6].

The use of contraception for the prevention of unintended pregnancy among HIV infected women is also recommended by the World Health Organization (WHO) in its 4-pronged approach for comprehensive prevention of mother to child transmission of HIV. Although addressing the contraceptive needs of women of childbearing age living with HIV is a cost-effective strategy for preventing unintended pregnancy and HIV transmission to unborn children [6]. Whereas the world is recording an increase in modern contraceptive use, especially in Asia and Latin America, the use of modern contraceptive methods continues to be low in Sub-Saharan Africa.

Globally, uptake of modern contraceptive has risen slightly, with 57% of women aged 15-49 years in 2012 using modern contraceptive. In Asia the uptake was 62%, and Latin America has 67% [7] In Previous studies of 42 sub-Saharan Africa countries, 10-65% of women reported that their last pregnancy had been unplanned. In studies of women with HIV infection approximately 70% are sexually active, effective contraception use is variable, and unplanned pregnancy frequently reported. A study on the impact of HIV diagnosis on sexual and contraceptive behaviour found that in the sexually active women, 20% were using no contraception, 24% became pregnant, and 63% of conceptions ended in abortion [8].

Prevalence of contraceptives among HIV infected women at 73.1% and 56.1% in Enugu and Zaria respectively (NBS, 2015) and a prevalence of 70% was recorded in Jos [9]. In 2014, 23% of sexually active Nigerian women used contraceptives, while 30 per cent used in 2015. Compiled data from the 2015 report of the National Bureau of Statistics, NBS, on health shows that contraceptive use among sexually active women of child bearing age increased by seven per cent compared to 2014.

There is wide variation in contraceptive prevalence worldwide ranging from 8 % of women aged 15–49 years in western Africa up to 78 % in northern Europe [10]. Although many effective contraceptive options are available in Africa, unintended and unwanted pregnancies still occur. The overall contraceptive prevalence among HIV positive women in Africa is 39.9 % [8]. The proportion of HIV positive females using contraception reported across Africa was reported at 69% in rural Uganda and 86% in South Africa In less developed countries 70 percent of contraception users rely on female sterilization and intrauterine devices in part because they are advocated by healthcare services as a result of cost effectiveness in terms of pregnancy prevention and service provision [10].

In India, study of pattern of contraception among HIV infected women, nearly 71.7% reported using condom alone, among the 74.% who reported using some contraception. Among them, 89.6% reported regular use. Overall, 31% yet wished to use only condom and 69% of them showed their inclination to use dual contraceptive methods, that is, condom plus another method such as tubectomy [58.45%], followed by IUD [30.34%], OCP [16.91%], and injectable [1.44%] [11]. This study assessed the determinants of choice and utilization of contraceptives among HIV Positive women receiving Anti-Retroviral Therapy (ART) at General Hospital Daura, Katsina State. Absence of awareness on the best pattern of conceptive methods to be used for the effective control of HIV remain high in the study area. The study will provide a way for infected women attending the ART services for effective method to use in order to prevent transmission of HIV from Mother to baby.

# 2. Methodology

## 2.1. Study Area, Design, Population and Sample Size

The study was carried out at General Hospital Daura which is the only centre providing comprehensive HIV care in Daura Local Government and one among the ART sites in the northern senatorial zone of Katsina State. Daura town lies in savanna zone at the intersection of roads from Katsina town, Kano, Zango, and Zinder (Niger Republic). It is 49 miles [79 km] North) of Katsina town and about 73 miles [117 km] south) from kano. Daura is situated at 13.04 ° North latitude, 8.32° East longitude and 478 meters elevation above the sea level.

Hausa is the predominant language spoken by both indigenes and non-indigenes in Daura in all forms of businesses and social interactions, Fulani is also a major language in the town. English is the official language in government. Other languages spoken are Yoruba and Igbo by other non-indigene settlers. The Religion practiced by most people in the town is Islam, with some few Christians in the town.

The study used a descriptive cross-sectional design and the target population is all HIV infected women within the reproductive ages seeking services at General Hospital Daura, the records from is 470 women currently on drugs have been attending General Hospital for more than 3 months. The sampling size of 198 will be drawn from the population using Fisher's formula as given by:
$n = (N * Z^2 * \sigma^2) / (E^2 * (N - 1) + Z^2 * \sigma^2)$

Where:
N = study population size (495)
n = $(470 * 1.96^2 * 0.5^2) / (0.05^2 * (470-1) + 1.96^2 * 0.5^2)$
n ≈ 198.

### 2.2. Sampling Techniques

The study used probability sampling techniques which gives every member of the population an equal chance to be chosen as part of the sample studied. Systematic sampling was used to select respondents for the study. This approach used qualitative research.

### 2.3. Limitations of the study

Some respondents might have the difficulty to express themselves due to the sensitive nature of the topic and shy culture of the study population.

### 2.4. Ethical Consideration

Ethical approval was sought from Health Research and Ethics Committee of Katsina Sate ministry of Health. After ethical approval, permission was sought from Katsina state Health Services Management Board (HSMB) before going to General Hospital Daura for data collection.

## 3. Results

The total of 198 questionnaires was used for the study across the population, 12 questionnaires representing 6.06% out of the 198 questionnaires distributed were not retrieved.

The table 1 minimum age of the respondents was 18 while the maximum was 45 years with a mean age of 29. ± 6.4 years. Most of the respondents (72.7 were aged between 25 – 34 years and 84 (45.2%) were married with 51 (60.7%) coming from a polygamous setting among which twenty-two (43.2%) had two co- partners. Sixty-nine (37.1%) of the respondents were educated up to primary school level. Forty-one percent were traders and 104 (55.9%) were living in rural areas. Sixty–three (33.9%) were nullipara while 19.4% had one child. Majority of the respondents (95.2%) were Muslims. Slightly over a half (51.6%) of the respondents earned between 500 – 1000 Naira weekly with a median income of 1500 Naira.

The table 2 above shows that (66.7%) of the respondents had a desire for more children. Out of the one hundred and one (101) respondents currently with sexual partnnship. Over three-quarters of them (76.2%) had diers, 54.5 % of them had one partner and majority (90.1%) were wives to their sexual partners. About 97% of the respondents had been in the relationship for less than 4 years while only 1% had stayed beyond 10 years in their current relatiosclosed their HIV status to their partners, 57.4% of them informed their partner on the use of contraceptives, 83.2% discussed contraceptives with their partners and 84.2% got approval from their partners to use contraceptives.

More than half of the respondents (55.4%) had been on ART for more than twenty–four months while about a fifth of them (21.5%) had taken ARVs for a period of between 6 to 12 months and seventy-seven (41.4%) of the respondents had a CD4 count of between 250 – 500ml/mm$^3$ in table 3.

The table 4 above shows that 63 respondents who had ever used contraceptive in the past, thirty–three (52.4%) reported the use of pills, 12.7% had used male condom while none had ever used IUD, female sterilization lactational amenorrhoea or withdrawal method, Among the respondents currently using contraceptives, pills were the most commonly used (55.7%). However, withdrawal, and emergency contraceptives were the least used (1.5%). No respondent used LAM or had either female or male sterilization done. Out of the respondents who were not currently using contraceptives, 54.3% of them had used one form of contraceptive in the past.

Current use of contraceptives was found to be significantly associated with all quality of health services factors; access to contraceptives ($P<0.001$), counselling by health provider ($P<0.001$), provision of information on how to use contraceptive ($P<0.001$), assurance of confidentiality by healthcare provider ($P<0.001$) and availability of preferred method ($P<0.001$) table 5.

After adjusting for all the variables in the table 6 above, marital status, parity and access to preferred method were found to be significant determinants of contraceptive use. Odds of using contraceptives were twenty-nine times higher among married women compared to unmarried women (adjusted OR 29.07, 95% CI: 3.54 –239.03 p=0.002). Also, primaprous respondents were seven times more likely to use contraceptives when compared to the nulliparous respondents (adjusted OR 7.42,95% CI: 2.68 – 20.58 p= 0.002). Additionally, odds of contraceptive use were 76% lower among women who didn't have access to their preferred method compared to those who did (adjusted OR 0.24, 95% CI: 0.07 –0.83 p=0.02).

## 4. Discussion

This study reported a low contraceptive prevalence among HIV positive women attending ART clinic in GH Daura. These findings are similar to a study done in Kumasi metropolis in Ghana where 32% rate was recorded [12]. This study is against the evidence from previous studies of contraceptive use among HIV positive women in sub–Saharan Africa which reported a relatively high contraceptive prevalence among uninfected women as compared to HIV-positive women [13].

The low contraceptive prevalence reported in this study may be due to lack of integration of family planning services in HIV clinic in the facility, lack of counselling by the staff attending to them and the culture in the environment. Also, unmarried women formed the larger percentage of the respondents in this study and the use of contraceptive in this group of women is low generally [7]. It also reflects the low contraceptive uptake in the general population despite the awareness, knowledge on the importance seems not to be enough. It might also be due to desire for children among the respondents and marital status. This may be due to easy access to the pills and its availability in the

**Table 1:** Socio-demographic Characteristics.

| **Variables (n)** | **Frequency** | **Percentage** (%) |
|---|---|---|
| **Age in years (186)** | | |
| $<25$ | 3 | 1.6 |
| 25 – 34 | 136 | 72.7 |
| 35 – 44 | 45 | 24.2 |
| $\geq 45$ | 2 | 1.1 |
| Mean=29.6 $\pm$ 6.4 years | | |
| **Marital status (186)** | | |
| Single | 69 | 37.1 |
| Married | 84 | 45.2 |
| Divorced | 5 | 2.7 |
| Separated | 26 | 14.0 |
| Widowed | 2 | 1.1 |
| **Type of marriage *(84)** | | |
| Monogamous | 33 | 39.3 |
| Polygamous | 51 | 60.7 |
| **No of co – wives** (51)** | | |
| 1 | 16 | 31.4 |
| 2 | 22 | 43.2 |
| 3 | 9 | 17.6 |
| 4 | 4 | 7.8 |
| **Highest level of education (186)** | | |
| None | 9 | 4.8 |
| Quranic | 38 | 20.4 |
| Primary | 69 | 37.1 |
| Secondary | 8 | 4.3 |
| Tertiary | 62 | 33.3 |
| **Religion (186)** | | |
| Islam | 177 | 95.2 |
| Christianity | 9 | 4.8 |
| **Parity (186)** | | |
| Nullipara | 63 | 33.9 |
| 1 | 36 | 19.4 |
| 2 | 34 | 18.3 |
| 3 | 727 | 14.5 |
| 4 | 12 | 6.5 |
| $\geq 5$ | 14 | 7.5 |
| **Weekly income in Naira (186)** | | |
| 500 – 999 | 96 | 51.6 |
| 1000 – 5999 | 81 | 43.5 |
| 6000 – 9999 | 6 | 3.2 |
| $\geq 10000$ | 3 | 1.6 |
| Median = 1500 Naira | | |
| **Occupation (186)** | | |
| Farmer | 10 | 5.4 |
| Civil servant | 53 | 28.5 |
| Trader | 77 | 41.4 |
| House wife | 36 | 19.4 |
| Others*** | 10 | 5.4 |
| **Domicile (186)** | | |
| Rural | 104 | 55.9 |
| Urban | 82 | 44.1 |
| Total | 186 | 100.0 |

**Table 2:** Reproductive and Sexual Characteristics.

| Variables (n) | Frequency | Percentage (%) |
|---|---|---|
| **Desire to Have children (186)** | | |
| Yes | 124 | 66.7 |
| No | 62 | 33.3 |
| **Currently having sexual partner (186)** | | |
| Yes | 101 | 54.3 |
| No | 85 | 45.7 |
| **Number of sexual partners (101)** | | |
| 1 | 55 | 54.5 |
| 2 – 4 | 43 | 42.6 |
| ≥5 | 3 | 2.9 |
| Median= 1 | | |
| **Relationship with sexual Partners (101)** | | |
| Husband | 91 | 90.1 |
| Boyfriend | 10 | 9.9 |
| **Duration of relationship in Years_(101)** | | |
| 0 – 4 | 98 | 97.0 |
| 5 – 9 | 2 | 2.0 |
| ≥10 1 1.0 **Disclosure of HIV Status to partner (101)** | | |
| Yes | 77 | 76.2 |
| No | 24 | 23.8 |
| **Partners knowledge on contraceptive use (101)** | | |
| Yes | 58 | 57.4 |
| No | 43 | 42.6 |
| **Discussion of contraceptives with partner (101)** | | |
| Yes | 84 | 83.2 |
| No | 17 | 16.8 |
| **Approval of contraceptives usage by partner (101)** | | |
| Yes | 85 | 84.2 |
| No | 16 | 15.8 |
| Total | 101 | 100.0 |
| **Desire to Have children (186)** | | |
| Yes | 124 | 66.7% |
| No | 62 | 33.3% |
| **Currently having sexual partner (186)** | | |
| Yes | 101 | 54.3% |
| No | 85 | 45.7% |
| **Number of sexual partners (101)** | | |
| 1 | 55 | 54.5% |
| 2 – 4 | 43 | 42.6% |
| ≥5 | 3 | 2.9% |
| Median= 1 | | |
| **Relationship with sexual Partners (101)** | | |
| Husband | 91 | 90.1% |
| Boyfriend | 10 | 9.9% |
| **Duration of relationship in Years_(101)** | | |
| 0 – 4 | 98 | 97.0% |
| 5 – 9 | 2 | 2.0% |
| ≥10 | 1 | 1.0% |
| **Disclosure of HIV Status to partner (101)** | | |
| Yes | 77 | 76.2% |
| No | 24 | 23.8% |
| **Partners knowledge on contraceptive use (101)** | | |
| Yes | 58 | 57.4% |
| No | 43 | 42.6% |
| **Discussion of contraceptives with partner (101)** | | |
| Yes | 84 | 83.2% |
| No | 17 | 16.8% |
| **Approval of contraceptives usage by partner (101)** | | |
| Yes | 85 | 84.2% |
| No | 16 | 15.8% |
| Total | 101 | 100.0 |

**Table 3:** Duration on ART for HIV.

| **Variables (n)** | **Frequency** | **Percentage** (%) |
|---|---|---|
| **Duration on ART** (months) | | |
| < 6 months | 40 | 21.5 |
| 6 – 12 | 25 | 13.4 |
| 13 – 24 | 18 | 9.7 |
| >24 | 103 | 55.4 |
| Mean = 31.9±29.3 | | |
| **Last CD4 Counts** | | |
| <200 | 0 | 0 |
| 200 – 500 | 77 | 41.4 |
| >500 | 109 | 58.6 |
| Mean= 541±198 | | |
| Total | 186 | 100.0 |

**Table 4:** Pattern of contraceptive use among those currently using.

| **Type of contraceptive** | **Frequency n=186** | **Percentage** |
|---|---|---|
| Pills | 39 | 55.7 |
| Male condom | 9 | 12.9 |
| Female condom | 6 | 8.6 |
| Injectables | 6 | 8.6 |
| Implants | 5 | 7.1 |
| IUD | 3 | 4.3 |
| Withdrawal | 1 | 1.4 |
| Emergency contraceptive | 1 | 1.4 |
| LAM | 0 | 0 |
| Female sterilization | 0 | 0 |
| Male sterilization | 0 | 0 |
| Withdrawal method | 0 | 0 |
| **Ever Used Contraceptive** | | |
| Yes | 63 | 54.3 |
| No | 53 | 45.6 |
| **Total** | **186** | **100.0** |

**Table 5:** Quality of Health service factors associated with contraceptive use.

| Factors (n=186) | Using contraceptive | Not using contraceptive | $X^2$ Value | P- Value |
|---|---|---|---|---|
| **Easy access to contraceptive** | | | | |
| Yes | 13 | 67 | 27.35 | <0.001* |
| No | 57 | 49 | | |
| **Counselling by health care worker** | | | | |
| Yes | 66 | 70 | 25.59 | <0.001* |
| No | 4 | 46 | | |
| **Information on how to use contraceptive** | | | | |
| Yes | 66 | 84 | 13.38 | <0.001* |
| No | 4 | 32 | | |
| **Confidentiality** | | | | |
| Yes | 68 | 70 | 30.874 | <0.001* |
| No | 2 | 46 | | |
| **Availability of preferred method** | | | | |
| Yes | 61 | 51 | 33.97 | <0.001* |
| No | 9 | 65 | | |

Significant at p-value < 0.05

**Table 6:** Determinants of contraceptive utilization among respondents.

| **Variables** | **Adjusted OR (95% confidence interval)** | **P- Value** |
|---|---|---|
| **Age** (Years) | | |
| 18 – 29 | 1.00 | |
| 30 – 39 | 0.94 (0.92 – 9.59) | 0.96 |
| >40 | 0.83(0.79 – 7.56) | 0.83 |
| **Marital status** | | |
| Unmarried | 1.00 | |
| Married | 29.07 (3.54 – 239.03) | 0.002* |
| **Highest level of Education** | | |
| None | 1.00 | |
| Primary | 3.32 (0.49 – 22.29) | 0.22 |
| Secondary and above | 0.98 (0.22 – 4.37) | 0.98 |
| **Place of domicile** | | |
| Rural | 1.00 | |
| Urban | 3.60 (0.85 – 15.27) | 0.08 |
| **Parity** | | |
| Nullipara | 1.00 | |
| Primipara | 7.42 (2.68 – 20.58) | 0.001* |
| Multipara | 4.72 (0.69 – 32.12) | 0.11 |
| **Desire for children** | | |
| Yes | 1.00 | |
| No | 0.40 (0.09 – 1.79) | 0.23 |
| **Easy access to contraceptive** | | |
| Yes | 7.19 (2.32 – 22.25) | 0.001* |
| No | 1.00 | |
| **Having sexual partner** | | |
| Yes | 1.00 | |
| No | 1.89 (0.69 – 5.16) | 0.22 |
| **Number of sexual partners** | | |
| >2 | 1.89 (0.69 – 5.16) | 0.22 |
| **Getting Information on how to use contraceptive** | | |
| Yes | 1.00 | |
| No | 0.85 (0.10 – 7.11) | 0.88 |
| **Confidentiality by HCW** | | |
| Yes | 1.00 | |
| No | 0.11 (0.11 – 1.10) | 0.06 |
| **Availability of preferred method** | | |
| No | 0.24 (0.07 – 0.83) | 0.02* |
| Yes | 1.00 | |
| **Counselling on contraceptive** | | |
| Yes | 1.00 | |
| No | 0.56 (0.05 – 6.35) | 0.64 |
| **Disclosure of HIV status** | 1.00 | |
| | 0.28(0.08 – 1.04) | 0.06 |

Adjusted for all variables in the table *Significant at p-value $< 0.05$

community. It may also be due to the non-invasiveness nature which is taken like any other drugs. Oral contraceptive pill has also been the most known method of contraceptive in the community. The increased use of pills in this could also be due to the reduced side effects, reduced cost and ease of use. It could also be because it's one of the common methods known by healthcare workers in the society. Pills is however not found to be recommended for HIV positive women due to its level of effectiveness, problem with pill burden and missing of doses which can lead to unwanted pregnancy [14]. Injectable contraceptives were currently being used by onl 8.6% of the respondents in this study. This is in contrast with many studies including the study from Zaria where it was revealed that the use of injectables were common (52%) among HIV-positive women attending ART clinic [15]. This finding may be due to the difficult access, reported side effects and technicality involved in taking it (need for a HCW). Also, Male condom was found to be low in this study (12.9%) when compared to the result of some studies where condom was reported as the most used method of contraception either alone or as part of dual method [16]. The effective and consistent use of condom alone has the potential to offer dual protection, thus reducing the burden of unwanted pregnancy and HIV [16].

This may be as a result of poor awareness of the method and its availability in the society. Most health workers in the community were also not familiar with female condom. This contrasts with a Soweto study which reported 7%[17]. The finding may be due to the cultural perception towards the invasive procedure in the society, although some respondents attributed this to a religious ruling. Additionally, no respondent reported the use of dual method which is the recommended method for the HIV clients. This may be due to poor awareness by the health workers managing the ART clinic and poor integration of reproductive services with ART programme in the facility. Access and availability of the methods in the clinic may also be a determining factor for this usage of dual method.

A study on contraceptive method choice in developing countries confirmed that prevalence is highest in countries where access to a wide range of methods is uniformly high [18]. However, there are still some countries in sub-Saharan Africa which offer a limited choice of contraceptive methods and couples cannot easily choose the method that best suits their reproductive needs [4].

Although marital status, education, place of domicile, parity, disclosure of status, access to contraceptives, counselling on contraceptive use, confidentiality, information on how to use and availability of preferred method were found to be associated with contraceptive utilisation, However, only marital status, parity, availability of preferred method and easy access to contraceptives remained significant determinants of choice and utilisation.

In this study, married women were more likely to use contraceptives than single ladies. This is similar to a study in Zaria where marriage also influenced use of contraception and uptake was more common among married women [15]. There was also reported association between marital status and contraceptive use in studies at Kenya and Uganda, where contraceptive use was common among the married women who have had children [19]. However a different report was found in Ethiopia where single women recorded higher use of family planning [12].

Quality of service including health provider's attitude, assurance of confidentiality and provision of enough counselling were found to be associated with the use of contraceptive in this study. While having access to contraceptives and getting preferred method are found to be determinants of contraceptive utilization in this study.

Access to contraceptive was found to be a determinant of usage in this study. This is consistent with a study in a similar poor resource setting are, accessibility and availability of contraceptive methods in health care services centres is a considerable factor that can influence the use of contraceptive. It is also similar to the feelings expressed by women in a study in Cofimvaba, South Africa where the contraceptive methods available at their nearest health centre or clinic may be able to influence their choice and use of contraceptive [20]. The finding is inconsistent with that of Uganda study where access was not statistically significant at multivariate analysis [21]. The reasons for the finding in this study may be due to poor access to different kinds of method to women of childbearing age. Most health facilities in the community have family planning units, but they may not be stocked with different modes of contraceptives thus limiting the women to a type which they may not prefer. The high consumption of Pills in this study also buttressed the importance of having access to methods. Accessibility to OCP is easy as its available both in hospitals and patent medicine stores.

## 5. Conclusion

It can be concluded from this study that contraceptive prevalence was low among HIV positive women collecting drugs at GH Daura. Only few respondents were currently using and had ever used contraceptives in the past. Pills were the most commonly used method and no respondent had ever used irreversible methods of contraception.

The determinants of contraceptive use in this study include marital status, parity, availability of preferred method and easy access to contraceptives. Use of contraceptives was significantly higher among HIV positive clients who were married, had one previous child, whose preferred method was available and those who could easily access contraceptives.

Reasons for contraceptive uptake varied and ranged from; safety of the method to affordability, access and effectiveness of preferred method. finally, some respondents used contraceptive to space childbirth and not to prevent HIV transmission. Those not using gave reasons like marriage, having no husband, desire for more children and fear of side effects from the contraceptives.

### Recommendations

Based on the outcome of the study, the following recommendations are provided to improve the current level of contraceptive usage and help minimize level of unwanted pregnancy among HIV positive clients.
State Ministry of Health and State agency for control of AIDS

- Educational interventions inform of awareness on contraceptive usage should be incorporated into the general healthcare and support programmes at the ART centres to improve knowledge among healthcare workers and clients.
- The issue of fear of safety of the method, which can lead to unmet need and contraceptive discontinuation, is better addressed during counselling. Contraceptive counselling services at the facility level should be strengthened.
- The implementing partners in the state should incorporate sexual and reproductive health services to include contraception in their programmes.

Health facility and community level

• To address reproductive issues concerning women on ART, health workers at the HIV clinics require training and need to intensify counselling and education on contraceptive use.
• Information, education and communication (IEC) programs should be intensified to enhance the commitment and motivation of users. By education, HIV positive women will be cognizant of their rights especially in fertility preference and ultimately offer them a greater decision-making power within family and also the society as a whole.
• There is need for male involvement in sexual and reproductive interventions such as family planning to improve the uptake of contraceptives among women.

### Article Information

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