

**Factors affecting utilization of family planning services among HIV-positive women attending the ART clinic in Muwanga Health Center III, Kiboga District.  
A cross-sectional study.**

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**Abstract**

**Background:**

Family planning (FP) is essential in promoting the health and well-being of HIV-positive women by preventing unintended pregnancies and improving maternal outcomes. This study assessed the personal, socio-economic, and health-system factors influencing the utilization of FP services among HIV-positive women attending the ART clinic at Muwanga Health Centre III in Kiboga District.

**Methodology.**

A hospital-based cross-sectional descriptive study was conducted among HIV-positive women selected using simple random sampling. Both quantitative and qualitative approaches were used. Data were collected using a structured questionnaire and presented using frequency tables, figures, and percentages.

**Results.**

Most respondents were aged 18-29 years (50%), had secondary education (29.5%), and were unemployed (61.4%). Family and friends were the primary source of FP information (40.9%). Condoms were the most commonly known (59.1%) and used FP method (63.3%). However, 56.8% believed FP was not important for HIV-positive women, and 56% felt FP had several bad side effects, contributing to low acceptability. Half (46.7%) relied on friends to choose FP methods, while 80% reported no adverse reactions. Socio-economic factors included religious disapproval (36.4%), desire for more children (50%), and unemployment (61.4%). From the health-system perspective, most respondents were not counseled about FP (65.9%), were unaware that FP services were offered (52.3%), and reported stockouts of FP commodities (50%).

**Conclusion.**

Utilization of FP services among HIV-positive women was influenced by personal factors such as knowledge, attitudes, and peer influence; socio-economic factors, including religion and partner opinion; and health-system factors such as inadequate counseling and commodity stockouts.

**Recommendations.**

The Ministry of Health should intensify FP sensitization targeting HIV-positive women and their partners, ensure consistent availability of FP commodities, and strengthen FP counseling at ART clinics. Women should be encouraged to seek FP information directly from healthcare providers.

**Keywords:** Family planning utilization, HIV-positive women, ART clinic, Muwanga Health Center III, Kiboga District.

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**Background**

According to the World Health Organization (2019), family planning is defined as a factor that allows individuals and couples to anticipate and attain their desired number of children, spacing, and timing of their births, which is achieved through the use of contraceptives. Family planning plays an important role in the prevention and control of HIV by improving maternal health and minimizing the cost of caring for the child who is infected with HIV, alongside the prevention of unintended pregnancies (Gumede-Moyo et al.,

2017). Choosing the number, timing, and spacing of children is a basic right of all women and couples, no matter their HIV status and every person also has the right to quality, voluntary contraceptive services, however, more than 218 million women worldwide had an unmet need for family planning, meaning they wanted to delay or avoid pregnancy but were not using a modern method of contraception (United States Agency for International Development, USAID, 2022).

In sub-Saharan Africa, approximately one in four women of reproductive age had an unmet need for family planning, and women living with HIV had even more limited access to contraception and reproductive health care than the general population (Kanyangarara et al., 2019). Many women, especially adolescent girls and young women, are simultaneously at risk for both unintended pregnancy and STIs, including HIV, yet some family planning measures, such as condoms, can reduce the risk of STIs (Feyissa et al., 2019).

In East Africa, Kenya made remarkable progress in integrating a range of reproductive health services with HIV/AIDS services over the past decade and in a study on strengthening integration of family planning with HIV/AIDS and other services from three Kenyan cities found that HIV positive women were counseled and referred for family planning services and this could have improved their uptake of the service (Mutisya, et al., 2019). In Uganda, over 43% of all pregnancies among young women living with HIV were either unwanted or mistimed and account for 21.3% of neonatal HIV infections, whereas contraceptive acceptability among this group was 40.7% (Wani et al., 2022). HIV-positive clients are a special population that has a regular follow-up schedule; their unique challenge is access to family planning services. The purpose of this study was to assess the factors affecting utilization of family planning services among HIV positive women attending the ART clinic in Muwanga HC III, Kiboga District.

### **Methodology.**

#### **Study Design.**

This was a hospital-based cross-sectional descriptive study. Both the qualitative and quantitative methods were used. The researcher described, narrated, and explained findings using the qualitative approach. The results were also presented in statistical form, both in percentages and frequencies, using the quantitative approach.

#### **Study Setting.**

The study was conducted in Muwanga Health Centre III, which is found in Kiboga District in western Uganda.

#### **Study Population.**

The study population included 50 HIV positive women attending the ART clinic at Muwanga HC III, Kiboga District.

#### **Sample Size Determination.**

A sample size of 44 respondents was used for the study, which was chosen using Krejcie and Morgan's Sample Size Determination Table, which showed that for a population of 50, the sample size should be 44 representatives. This sample gave a good representation of the study population.

### **Sampling Procedure.**

The researcher used the simple random sampling method. The ballot system was used to eliminate bias during sample selection. The researcher made 50 ballots, out of which only 44 had the word „yes“ and 6 had the word „no“. These were all mixed in a box and shaken to ensure thorough mixing, then each member of the study population was given a chance to pick a ballot. Whoever picked a ballot with the word „yes“ was included in the study.

### **Inclusion Criteria.**

The study included all HIV positive women attending the ART clinic in Muwanga HC III, Kiboga District who consented to take part in the study.

### **Research Instrument.**

The study used a questionnaire to collect data on the factors affecting utilization of family planning services among HIV positive women. The questionnaire consisted of short open and closed-ended questions.

### **Data Collection Procedure.**

Ahead of the survey in which a questionnaire was used, the researcher began by seeking permission from the person in charge of Muwanga HC III. Informed consent was sought from the respondents before being enrolled in the study. The researcher issued a questionnaire to each respondent and encouraged her to fill it out alone as soon as possible. The respondents were found at the ART clinic at Muwanga HC III, Kiboga District. The respondents later returned the questionnaires to the researcher, who inspected them to make sure that they were filled out.

### **Data Management**

All the questionnaires were checked while still in the field to ensure that they were filled out. To ensure confidentiality, the researcher filed all the completed forms in a box file in their respective order in relation to the respondents' study numbers.

### **Data Analysis and Presentation.**

Different proportions for categorical data were generated and presented in frequency tables, pie charts, and bar graphs. Numerical data were summarized and presented in histograms or line graphs.

### **Ethical Considerations.**

The introductory letter was obtained from Lubaga School of Nursing and Midwifery, seeking permission to carry out the study from Muwanga HC III, Kiboga District. The health center in charge granted permission before data collection commenced.

Consent was sought from the respondents before taking part in the study. Participants were informed that they had the

right to withdraw from the research at any time without any prejudice. Subject to legislation, participants were informed that information obtained during investigations was

confidential, and participant codes were used instead of their names during data collection.

## RESULTS

**Figure 1: Showing respondents' age n=44**

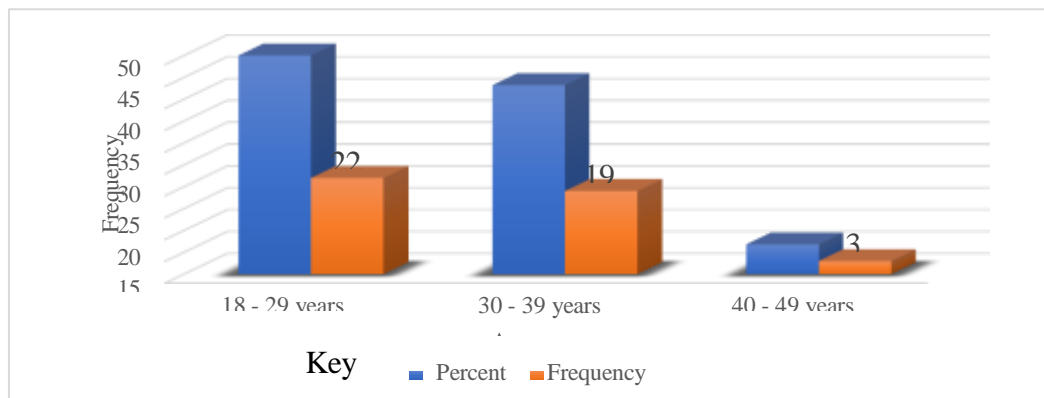


Figure 1 shows that half of the respondents, 22 (50%), were in the 18 – 29 years age group, 19 (43.2%) were in the 30 – 39 years age group, whereas 3 (6.8%) were in the 40 – 49 years age group.

**Table 1: Respondents' level of education.**

Age range	Frequency (n=44)	Percent (%)
No formal education	08	18.2
Primary school education	11	25
Secondary school education	13	29.5
Tertiary/university school education	12	27.3
<b>Total</b>	<b>44</b>	<b>100</b>

Table 1 shows that most respondents, 13 (29.5%), had secondary school education, 12 (27.3%) had tertiary/university school education, 11 (25%) had primary school education, whereas 8 (18.2%) had no formal education.

**Table 2: Respondents' religion.**

Religion	Frequency (n=44)	Percent (%)
Catholics	16	36.4
Born again	10	22.7
Muslim	15	34.1
None	03	6.8
<b>Total</b>	<b>44</b>	<b>100</b>

Table 2 showed that the majority of the respondents, 16 (36.4%), were Catholics, 15 (34.1%) were Muslims, 10 (22.7%) were Born-Again, whereas 3 (6.8%) did not belong to any religious group.

## Personal factors affecting utilization of FP services among HIV positive women

**Figure 2: Source of information on FP n=44.**

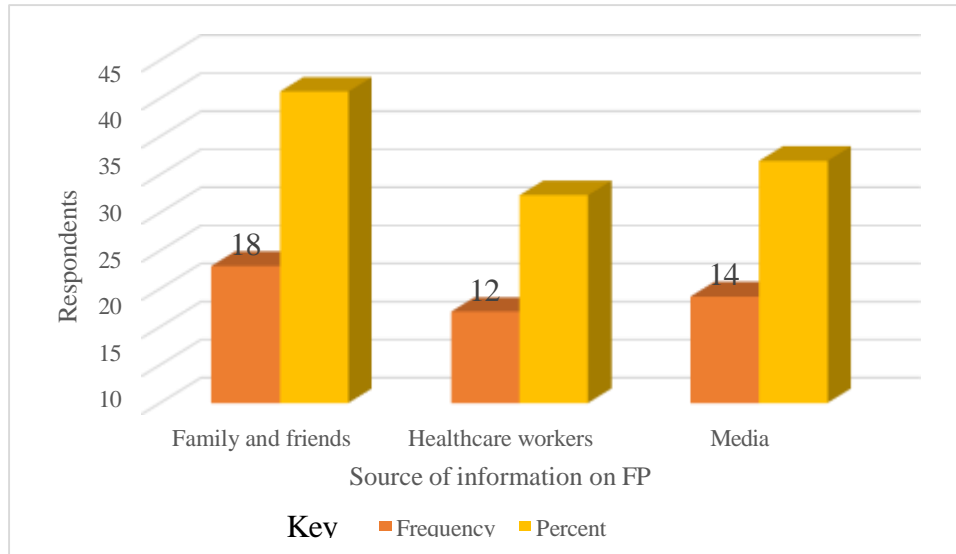


Figure 2, most respondents 18, 40.9%) reported that family and friends were their source of information on FP, 14 (31.8%) mentioned media, whereas 12 (27.3%) mentioned healthcare workers.

**Table 3: FP methods**

FP methods	Frequency (n=44)	Percent (%)
Pills	08	18.2
Coil	04	9.1
Withdraw method	06	13.6
Condoms	26	59.1
<b>Total</b>	<b>44</b>	<b>100</b>

Table 3 showed that most respondents, 26 (59.1%), mentioned condoms, 8 (18.2%) mentioned pills, 6 (13.6%) mentioned the withdrawal method, whereas 4 (9.1%) mentioned coils.

**Figure 3: Use of FP n=44**

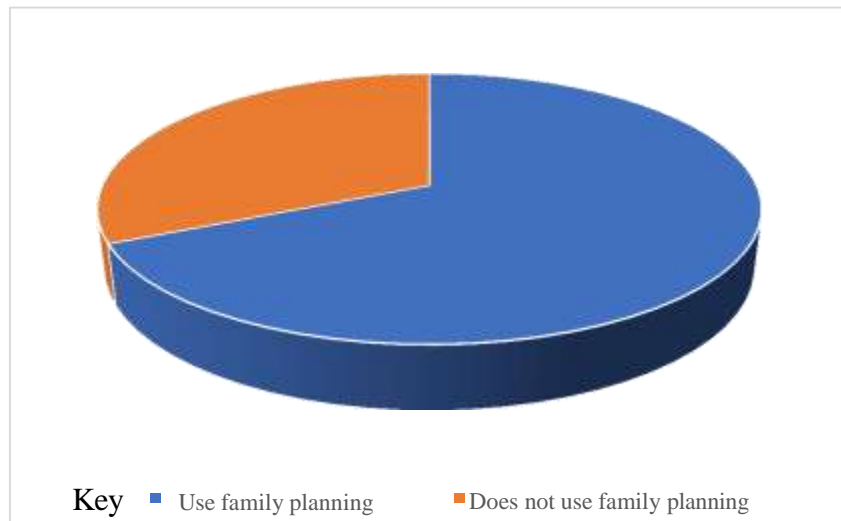


Figure 3, 30 (68.2%) reported that they used FP methods, whereas 14 (31.8%) did not use FP methods.

**Table 4: FP methods used by respondents.**

FP methods used by respondents	Frequency (n=30)	Percent (%)
Condoms	19	63.3
Coil	08	26.7
Pills	03	10
<b>Total</b>	<b>30</b>	<b>100</b>

From the table above, the majority of the respondents, 19 (63.3%), reported that they used condoms, 8 (26.7%) reported that they used coils, whereas 3 (10%) reported that they used pills.

**Table 5: Choice of FP method.**

Variable	Frequency (n=30)	Percent (%)
Through counseling	12	40
Made a choice alone	04	13.3
A friend chose for me	14	46.7
<b>Total</b>	<b>30</b>	<b>100</b>

Table 5 showed that most respondents 14, 46.7%) reported that their friends helped them choose a FP method, 12 (40%) reported that they were counseled on the choice of FP method, whereas 4 (13.3%) reported that they chose on their own.

**Figure 4: Whether respondents had bad reactions from FP methods, n=44.**

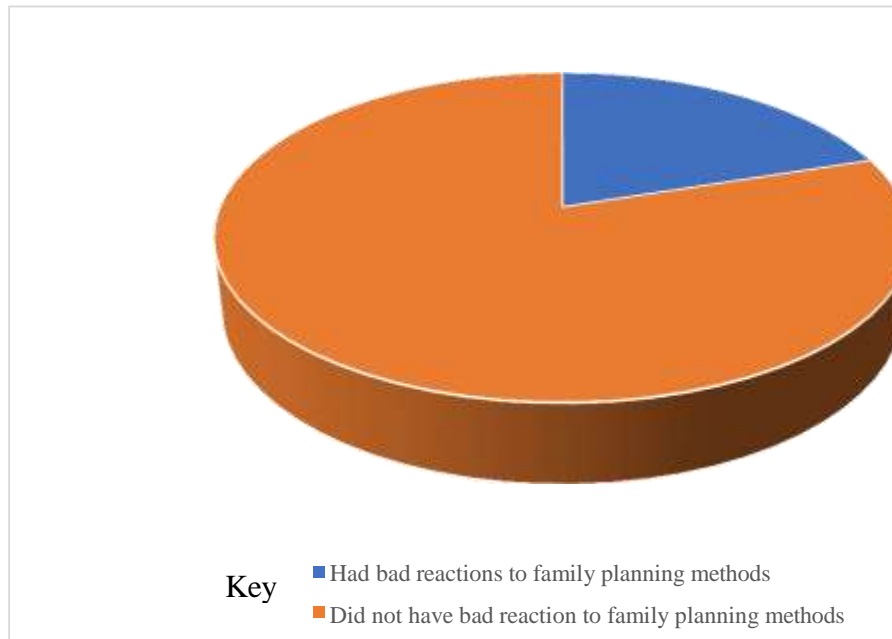


Figure 4 showed that most respondents, 24 (80%), did not have a bad reaction to FP methods, whereas 6 (20%) reported that they had a bad reaction to FP methods.

**Table 6: Reaction from FP methods.**

Variable	Frequency (n=06)	Percent (%)
Heavy bleeding	03	50
Missed menses	01	16.7
I cannot feel the strings	02	33.3
<b>Total</b>	<b>06</b>	<b>100</b>

From table 6, 3 (50%) respondents reported heavy bleeding from FP methods, 2 (33.3%) reported that they could not feel the strings, whereas 1 (16.7%) reported that they missed their menses.

**Figure 5: Whether it was important for HIV positive mothers to use FP methods, n=44.**

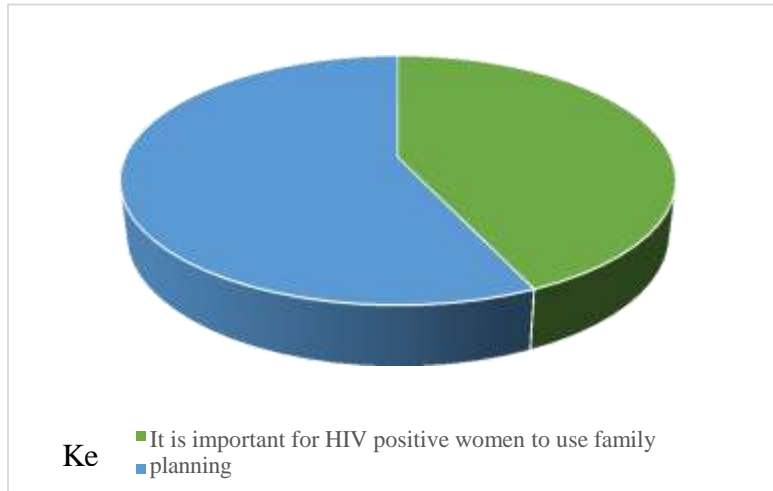


Figure 5 showed that the majority of the respondents, 25 (56.8%), reported that it was not important for HIV positive women to use FP, whereas 19 (43.2%) reported that it was important for HIV positive women to use FP.

**Table 7: Importance of FP to HIV positive women.**

Variable	Frequency (n=19)	Percent (%)
To space children	08	42.1
To prevent infections	01	5.3
To have a small number of children	03	15.8
To reduce the number of abortions	07	36.8
<b>Total</b>	<b>19</b>	<b>100</b>

From table 7, 8 (42.1%) respondents reported that it helps them space children, 7 (36.8%) reported that it reduces the number of abortions, 3 (15.8%) reported that it helps them have a small number of children, whereas 1 (5.3%) reported that it helps them prevent infections.

**Table 8: Disadvantages of FP.**

Variable	Frequency (n=25)	Percent (%)
It has several bad side effects	14	56%
It encourages one to have multiple sexual partners	11	44%
<b>Total</b>	<b>25</b>	<b>100%</b>

Table 8 showed that most respondents, 14 (56%), reported that FP has several side effects, whereas 11 (44%) reported that it encourages one to have multiple sexual partners.

**Figure 6: Recommending other HIV positive women to use FP n=44**

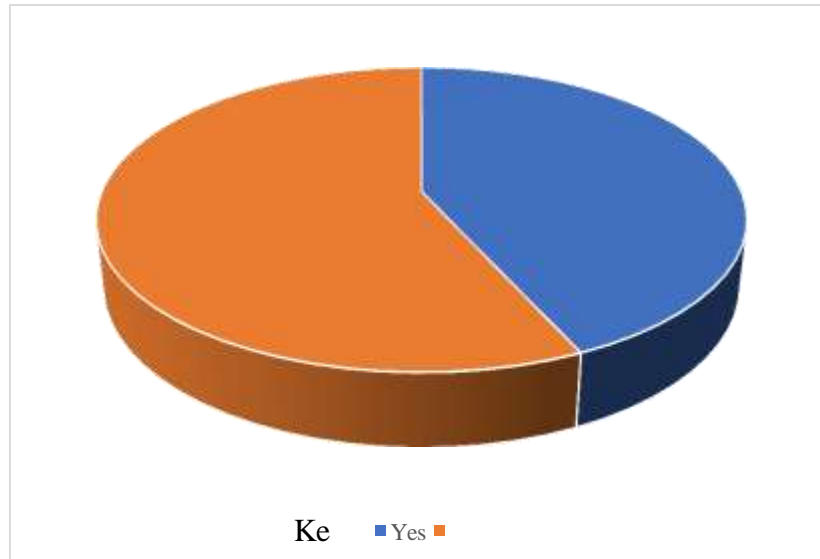


Figure 6 showed that the majority of the respondents, 25 (56.8%), reported that they would not recommend other HIV positive women to use FP methods, whereas 19 (43.2%) reported that they would recommend HIV positive women to use FP methods.

**Table 9: Reasons for recommending other HIV positive mothers to use FP.**

Variable	Frequency (n=19)	Percent (%)
To space children	08	42.1
To prevent sexually transmitted infections	01	5.3
To reduce abortions	07	36.8
To have a small number of children	03	15.8
<b>Total</b>	<b>19</b>	<b>100</b>

The majority of the respondents, 8 (42.1%), reported that FP helps in spacing children, 7 (36.8%) reported that it reduces abortions, 3 (15.8%) reported that it enables one to have a

small number of children, whereas 1 (5.3%) respondent reported that it helps prevent sexually transmitted infections.

**Table 10: Reasons for not recommending other HIV positive mothers to use FP.**

Variable	Frequency (n=25)	Percent (%)
It has several bad side effects	14	56
It leads to having multiple sex partners	11	44
<b>Total</b>	<b>25</b>	<b>100</b>

Table 10 Showed That 14 (56%) respondents reported that FP has several bad side effects, whereas 11 (44%) respondents reported that FP leads to having multiple sex partners.

### Socio-economic factors affecting utilization of FP services among HIV positive women

**Figure 7: Religious view on FP n=44**

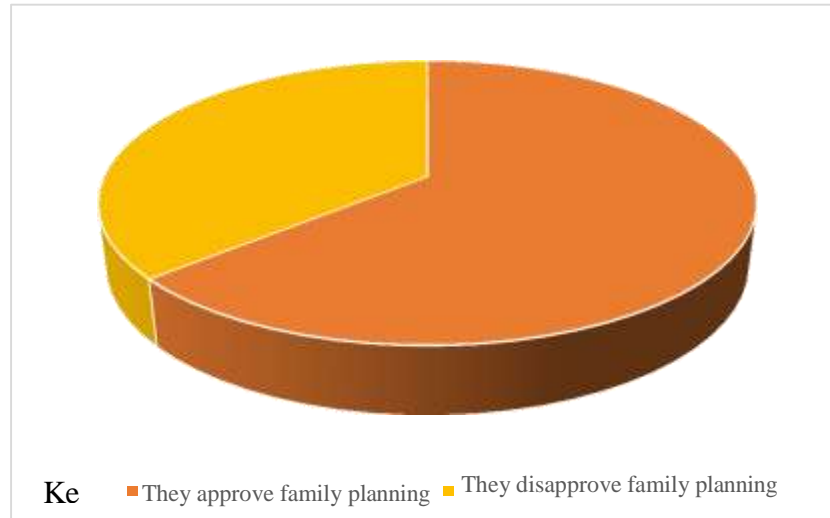


Figure 7 showed that the majority of the respondents, 28 (63.6%) reported that their religion approved FP whereas 16 (36.4%) reported that their religions disapproved of FP.

**Table 11: Society's opinion on FP.**

Variable	Frequency (n=44)	Percent (%)
They approve FP	44	100
<b>Total</b>	<b>44</b>	<b>100%</b>

From Table 11, all the respondents, 44 (100%), reported that their societies approved FP methods.

**Figure 8: Whether respondents needed to produce more children, n=44.**

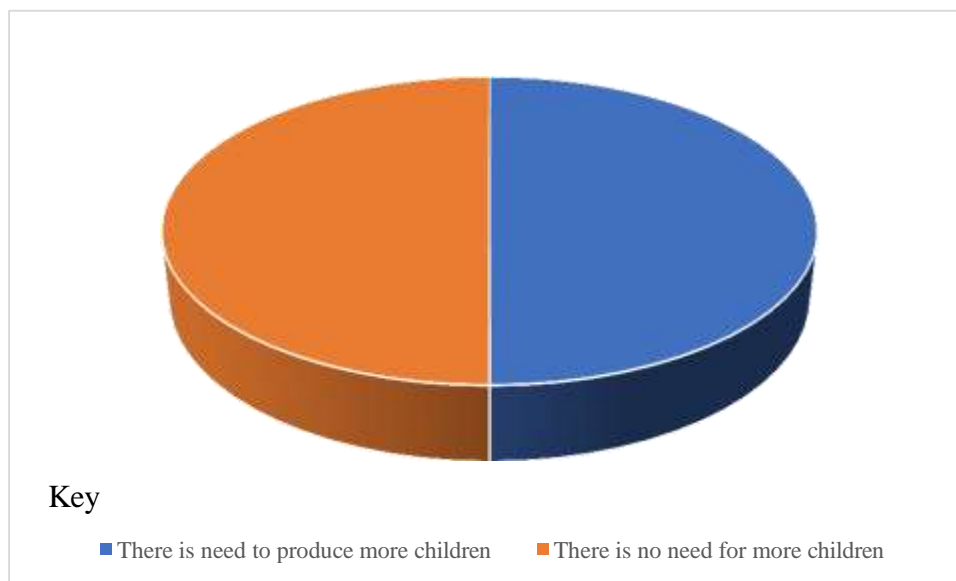


Figure 8 showed that 22 (50%) respondents reported that they needed to produce more children, whereas an equal number reported that they did not.

**Table 12: Husband’s opinion about producing more children.**

Variable	Frequency (n=44)	Percent (%)
He wants to have more children	12	27.3
He feels we have had enough	21	47.7
We have not discussed it	11	25
<b>Total</b>	<b>44</b>	<b>100</b>

From table 12, 21 (47.7%) respondents reported that their partners did not want to have more children, 12 (27.3%) reported that their partners wanted more children, whereas 11 (25%) reported that they had not discussed the topic with their partners.

**Figure 9: Respondents’ employment status n=44.**

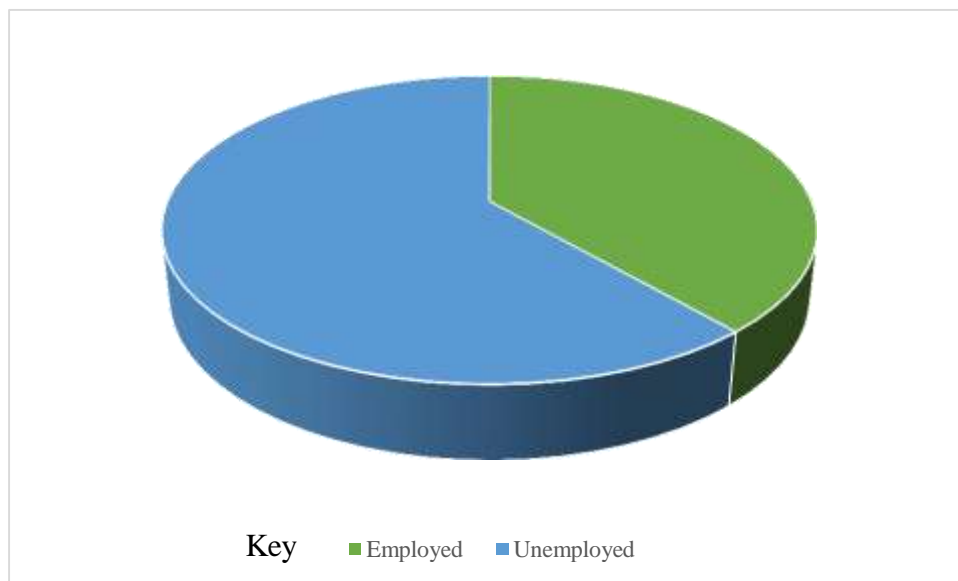


Figure 9 shows that, majority of the respondents, 27 (61.4%), reported that they were unemployed, whereas 17 (38.6%) reported that they were employed.

**Table 13: Distance between respondents’ homes and health facilities**

Variable	Frequency (n=44)	Percent (%)
0.5 – 1 kilometer	15	34.1
2 – 3 kilometers	17	38.6
4 – 5 kilometers	12	27.3
<b>Total</b>	<b>44</b>	<b>100</b>

Table 13 showed that most respondents, 17 (38.6%), reported that their homes are 2 – 3 kilometers from the health facility, 15 (34.1%) reported that their homes were 0.5 – 1 kilometer from the health facility, whereas 12 (27.3%) respondents reported that their homes are 4 – 5 kilometers from the health facility.

**Table 14: Whether respondents paid for services from the health facility or not**

Variable	Frequency (n=44)	Percent (%)
Paid for services	21	47.7%
Did not pay for services	23	52.3%
<b>Total</b>	<b>44</b>	<b>100</b>

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From table 14, the majority of the respondents, 23 (52.3%), reported that they did not pay for services, whereas 21 (47.7%) reported that they paid for services.

**Health system factors affecting utilization of FP services among HIV positive women.**

**Figure 10: Whether healthcare workers talked to respondents about FP n=44**

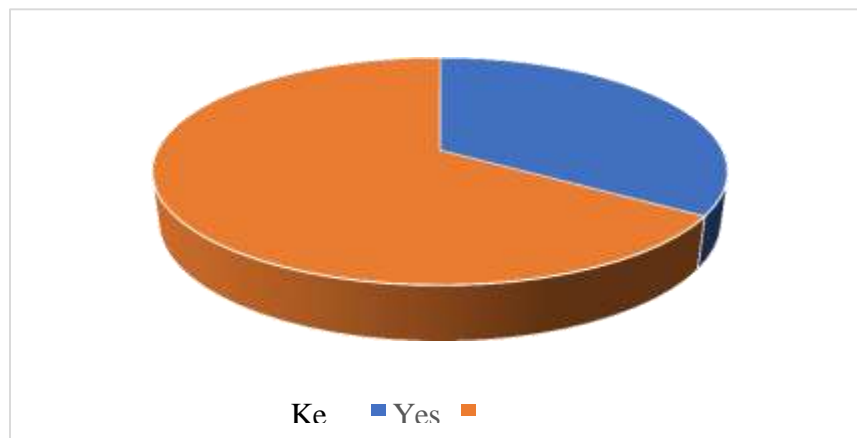


Figure 10 showed that the majority of the respondents, 29 (65.9%), reported that the healthcare workers did not talk to them about FP, whereas 15 (34.1%) reported that they did.

**Table 15: Healthcare workers' information on FP.**

Variable	Frequency (n=15)	Percent (%)
FP options	07	46.7
Advantages of FP	05	33.3
They recommended that I do FP	03	20
<b>Total</b>	<b>15</b>	<b>100</b>

From table 15, most respondents 7, 46.7%) reported that healthcare workers talked to them about FP options, 5 (33.3%) reported that they talked about the benefits of FP, whereas 3 (20%) reported that they recommended respondents to use FP methods.

**Figure 11: Whether respondents were aware that the health facility offered FP, n =44**

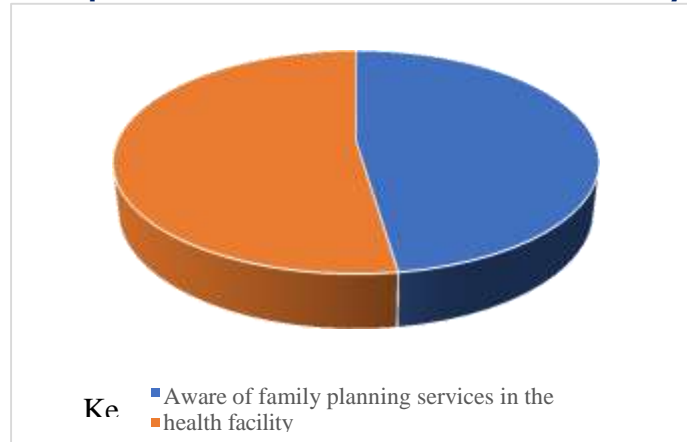


Figure 11 showed that the majority of the respondents, 23 (52.3%), were not aware of FP services in the health facility, whereas 21 (47.7%) reported that they were aware of FP services in the hospital.

**Table 16: Whether respondents had missed FP methods due to stockouts.**

Variable	Frequency (n=15)	Percent (%)
Yes	22	50
No	22	50
<b>Total</b>	<b>15</b>	<b>100</b>

From table 16, 15 (50%) respondents reported that they missed FP methods due to stock out, whereas an equal number reported that they had not missed FP methods due to stock out.

### Discussion of results.

#### Personal factors affecting utilisation of FP services among HIV positive women.

The study results showed that most respondents 18, 40.9%) reported that family and friends were their source of information on FP. This implied that friends and family were an important source of information on FP. This finding was consistent with that of Wani et al. (2022), who stated that participants who had friends on contraceptives had higher odds of acceptability for family planning measures than those who were not.

From the study results, it was found that most respondents, 26 (59.1%), mentioned condoms as a family planning method. This implied that the condom was the most well-known family planning method among respondents, and it was most likely to be used by the respondents. This finding was in agreement with that by Magala et al. (2017), who found that knowledge of a family planning measure often led to its uptake.

From the study findings, most respondents 14, 46.7%) reported that their friends helped them choose a FP method; this implied that the friends were very influential when it

came to the choice of FP methods among the study participants. This finding is in agreement with that by Wani et al. (2022), who stated that participants who had friends on contraceptives had high odds of acceptability for family planning measures.

The study found that most respondents, 24 (80%), did not have a bad reaction to FP methods, which implied that this did not prevent respondents from using FP methods. This finding did not agree with that of Omona and Muhanuzi (2022), who found that the fear of negative side effects of FP discouraged study participants from using FP services.

From the study findings, most of the respondents, 25 (56.8%), reported that it was not important for HIV positive women to use FP, and 14 (56%) reported that it was because FP has several side effects. This implied a negative attitude towards FP services among study participants. This finding did not agree with that of Akelo et al. (2013), who reported that the factors associated with positive intentions to use family planning were a positive attitude towards family planning measures.

The study findings showed that the majority of the respondents, 25 (56.8%), reported that they would not recommend other HIV positive women to use FP methods, and 14 (56%) respondents reported that it was because FP has several bad side effects. This implied a negative attitude towards FP services among study participants, and it could have affected the utilisation of the service. This finding

agreed with that by Akelo et al. (2013), who reported that the factors associated with positive intentions to use FP were a positive attitude towards family planning measures.

### **Socio-economic factors affecting utilisation of FP services among HIV-positive women**

From the study findings, 16 (36.4%) reported that their religion disapproved of FP, and this was in agreement with the findings by Akateh et al. (2019), who reported that religion discouraged them from taking up family planning measures.

The study results showed that all the respondents, 44 (100%), reported that their societies approved FP methods. This implied that the fear of stigma from society did not affect the utilisation of FP services. This finding differed from that of Omona and Muhanuzi (2022), who found that the fear that the community would talk negatively about people who use modern FP methods discouraged them from using modern FP methods.

From the study findings, half of the respondents, 22 (50%), reported that they needed to produce more children; however, 21 (47.7%) respondents reported that their partners did not want to have more children. This implied that the male partners were most likely to encourage their partners to use FP. This finding was consistent with that of Rajani et al. (2018), who stated that the use of FP was high among study participants who were supported by the male partner.

The study found that the majority of the respondents, 27 (61.4%), reported that they were unemployed, and this implied that they most likely could not afford FP services that were for sale due to lack of funds. Similar findings were reported by Mbabazi et al. (2022), who reported that unemployed women were less likely to use contraceptives.

From the study results, 17 (38.6%) respondents reported that their homes were 2 – 3 kilometers from the health facility. This was not found to affect utilisation of FP services. This finding differed from that of Mbabazi et al. (2022), who found that study participants who had to travel long distances from their homes to health facilities were unlikely to use family planning methods.

The study further found that the majority of the respondents, 23 (52.3%), reported that they did not pay for FP services at the health facility; therefore, this could have encouraged them to utilise FP services.

### **Health system factors affecting utilisation of FP services among HIV-positive women**

From the study findings, the majority of the respondents, 29 (65.9%), reported that the healthcare workers did not talk to them about FP. This could have affected the utilisation of FP services because the study participants would be denied vital information about FP. However, this did not agree with the finding by Kanyangarara et al. (2019) who reported that HIV

positive females who had information about FP from the health facilities were less likely to use family planning compared to those who did not.

The study results showed that the majority of the respondents, 23 (52.3%), were not aware of FP services in the health facility; this could have negatively affected the utilisation of FP services among these respondents. This finding was consistent with that of Mbabazi et al. (2022), who found that contraceptive uptake was lower among women who did not receive family planning counselling than among those who received family planning counselling at the health facility.

The study found that 15 (50%) respondents reported that they missed FP methods due to stockouts. This implied that the lack of stock for FP services negatively affected the utilisation of FP services among study participants. This finding was consistent with that of Omona and Muhanuzi (2022), who found that family planning services were often unavailable, hence discouraging most clients from using them.

### **Conclusions.**

The study found that the personal factors affecting utilisation of FP services among HIV-positive women included being married and knowledge of family planning methods, having friends on FP.

Regarding the socio-economic factors affecting utilisation of FP services, the study found religion, female partners' desire not to have more children, and unemployment.

The health system factors affecting utilisation of FP services included not being educated on FP services at the health facility, lack of information about FP services at the health facility, and stockout of family planning methods.

### **Recommendations**

The study recommends that the Ministry of Health carry out family planning sensitisation among communities with programs targeting HIV positive people.

The study recommends that the Ministry of Health provide free family planning services targeting HIV-positive couples to encourage utilisation of FP.

The health facility should always educate HIV positive mothers and their partners about the benefits of utilising FP services.

The study participants should seek information about FP methods from the health care workers at the facility. This would enable them to choose the most preferred FP method.

### **Acknowledgement.**

I thank the Almighty God for enabling me to carry out this research. I also thank my supervisor, Mr Kimera Donatus, for guiding me to the completion of the study. I thank the study respondents and the management of Muwanga Health Centre III for enabling me to collect data.

### List of abbreviations.

<b>AIDS:</b>	Acquired immune deficiency syndrome
<b>ANC:</b>	Antenatal care
<b>ART</b>	Anti-retroviral Therapy
<b>FP:</b>	Family planning
<b>HIV:</b>	Human immunodeficiency virus
<b>HTC:</b>	HIV testing and counselling
<b>MCH:</b>	Maternal Child Health
<b>MoH</b>	Ministry of Health
<b>PMTCT</b>	Prevention of Mother-to-Child Transmission
<b>RH:</b>	Reproductive health
<b>WHO:</b>	World Health Organization

### Source of funding.

The study was not funded.

### Conflict of interest.

There is no conflict of interest.

### Availability of data.

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

### Author's contribution.

GN designed the study, conducted data collection, cleaned and analyzed data, drafted the manuscript, and DK supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

### Author's biography.

Gorret Najjuma is a student of diploma in Midwifery at Lubaga Hospital Training Schools.

Donatus Kimera is a research supervisor at Lubaga Hospital Training Schools.

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