

Factors affecting the uptake of modern family planning services among women living with HIV/AIDS in the reproductive age receiving care from Fort Portal regional referral hospital, Kabarole district, Uganda

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ABSTRACT

This study determined factors that limit the usage of modern family planning services among women of reproductive age living with HIV/AIDS receiving care at Fortportal Regional referral Hospital, Fortportal city, Kabarole district. A descriptive cross-sectional study was carried out in Fortportal Regional Referral Hospital HIV clinic, family planning clinic, GYN OPD, GYN ward, Fortportal city, Kabarole District involving 378 women of reproductive age. Data was collected using structured researcher administered questionnaire and analyzed using SPSS version 16.0 From 378 respondents, approximately 39% (148) of women of reproductive age living with HIV were using modern contraceptive; 54% HIV clinic, 18% female ward, 14.5% GYN OPD, 14.1% GYN ward Majority of respondents were aged 30-40 years (55.8 %), who were commonly using the injectable (56.7%) from the hospital family planning clinic. (47.3%) women had more than three children, (67.8%) attended secondary school, (5%) tertiary level of education and (68%) had been counselled about family planning. As a result, women who had about 3 children, attained a secondary school, education aged 30-40 were more likely to utilize modern family planning methods than their counterparts who stopped at the primary level and social categories. Depicted low uptake levels of modern contraceptives in women aged 29 years and below and illiterates about family planning methods. Injectables were the most used method with family planning counseling and attending any level education was associated with increased contraceptive uptake among women with HIV.

Keywords: Contraceptive Uptake, HIV/AIDS, Family Planning, Injectables, Implants Usage, Reproductive Health

INTRODUCTION

Family planning (FP) empowers individuals or couples to decide on the number and timing of their children through informed choices involving modern or natural methods [1]. Modern contraceptive methods include oral contraceptives, injectables like Depo-Provera, implants (e.g., Jadelle, Implanon), intrauterine devices (IUDs) such as CuT380A and Mirena, barrier methods (condoms, diaphragms), and permanent options like vasectomy and tubal ligation [2,3]. Traditional methods include the Lactational Amenorrhea Method (LAM), fertility awareness-based approaches, and coitus interruptus. The World Health Organization (WHO) confirms that nearly all these methods are safe for people living with HIV, highlighting their relevance in reproductive health [4]. Family planning is integral to achieving Sustainable Development Goals (SDGs), particularly Goal 3

(good health and well-being) and Goal 5 (gender equality), as it is a key indicator of maternal health improvements [5]. Despite its significance, global maternal mortality remains a pressing issue, with pregnancy-related complications causing around 70,000 deaths annually [6]. Developing countries, particularly in sub-Saharan Africa, account for 99% of these deaths, with over half occurring in this region. In Uganda, where the fertility rate is 5.4 births per woman [7], challenges such as social, political, moral, and cultural factors impede FP utilization.

Globally, unintended pregnancies remain prevalent, with nearly 21 million unintended pregnancies annually in developing countries. Adolescent girls, aged 15-19, are particularly vulnerable, with only 40% using modern contraceptive methods [3]. Furthermore, HIV/AIDS significantly impacts

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reproductive health, as 16 million women globally live with HIV, with 1.4 million pregnant women at risk of mother-to-child transmission (MTCT) annually. In Uganda, injectables and implants are the most popular contraceptive methods among married women, with usage peaking at ages 40–45 [7]. The interplay between HIV and reproductive health highlights the need for integrated FP services. Effective FP can reduce unregulated fertility, improve maternal and child health, and mitigate MTCT. Sub-Saharan Africa, home to 68% of people living with HIV/AIDS, faces challenges in providing accessible FP services due to high fertility rates, poverty, and inadequate infrastructure. Many women with HIV experience unplanned pregnancies, exacerbating health risks and increasing pediatric HIV cases through vertical transmission [3].

In Uganda, despite free FP services at various health centers, utilization remains low at 43.3%, far below the WHO recommendation of 100% [8]. The country's maternal mortality rate is one of the

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highest globally, at 336 deaths per 100,000 live births. Additionally, 28% of currently married women have an unmet need for FP. At Fortportal Regional Referral Hospital, only 34% of women of reproductive age use contraceptives, with injectables being the most common method (74%) [9]. HIV-positive women face unique challenges in accessing FP services. Many resume sexual activity as their health improves on antiretroviral therapy (ART), yet the prevention of unintended pregnancies among them has been overlooked [10]. Addressing this gap is critical for reducing MTCT and achieving international standards for comprehensive PMTCT strategies. This study investigates the factors affecting the uptake of modern FP services among HIV-positive women of reproductive age at Fortportal Regional Referral Hospital. The general objective is to understand these factors to improve FP utilization, thereby enhancing maternal and child health outcomes and reducing HIV-related reproductive health challenges.

METHODOLOGY

Study Design

The study used a cross sectional and descriptive study design in which data was collected since data collected at a single point in time to describe the factors that influenced the use of modern family planning methods among the women of reproductive age living with HIV/AIDS.

Study area

The study was conducted at Fort portal Regional Referral Hospital, located in Western Uganda in Fort portal district, Fort portal municipality. The hospital is situated in Fort portal town along Fort portal-kamwengye road. It's a Regional Referral district hospital, it serves a population of about 450,000 people from districts of Kyegegwa, kyenjojo, kasese, kamwengye, Fort portal, bunyangabu, and Kitagwenda district. The hospital had a bed capacity of 900 beds with 8 wards but the in-patient capacity could overwhelm the hospital's available facilities that could cause many people to sleep on the floor and veranda. The hospital offered preventive, curative and surgical services and among the wards; it inclusively had medical, gynecology and obstetrics wards as well as operating theatre (surgical and Gyn and Obstetrical). It also had the outpatient department (OPD) that is to say; gynecological, family planning, ART clinic and Antenatal care (ANC) services for pregnant mothers. The hospital was considered as the area of the study due to the fact that it was a Regional Referral Hospital and it being among the satellite sites for medical training of KIU students and it had the highest number of HIV clients of all ages, as well

as Family planning clinic which would make it easy for the researcher to achieve the sample size in time.

Study Population

The study targeted women of reproductive age living with HIV who thought for family planning services at the Family Planning Clinic, Gynecological services at the GYN OPD and those who received services at the GYN ward, HIV services at the HIV clinic and those who received medical services at the female medical ward at Fortportal Regional Referral Hospital.

Sample Size Determination

The sample size was determined from the formula by Kish Leslie as indicated below

$$n = \frac{Z^2 p(1-p)}{d^2}$$

$z = 1.96$ (the standard normal deviation at 95% confidence interval)

$p = 43.3\%$ (Utilization of modern family planning in Tooro region, [7]).

$d =$ maximum error the investigator is willing to allow between the estimated prevalence of the problem in the people = 5%.

$$n = \frac{1.96 \times 1.96 \times 0.4338 \times 0.567}{0.05 \times 0.05}$$

$$n = (377.96 \text{ women})$$

Therefore, sample size was 378 respondents

Sampling Procedure

Conservative sampling was used to select the participants at the HIV clinic, GYN OPD, GYN ward, Female medical ward, since these were the places the study participants could be obtained. Simple random was used to select the study

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participants in which pieces of paper were written on with words YES and NO, put in a box, shook thoroughly and then the clients available on the day of data collection were allowed to pick a paper and all those who will pick a paper with YES were interviewed until the sample size was reached

Inclusion criteria

The study included any woman of reproductive age who consent to participate in the study, those who were diagnosed and known to be living with HIV 3 months prior the research in the shortlisted areas, both new and old clients at the Family planning meeting the criterion. The participants were from Fort portal district, participants (PLWHIV) in the reproductive age who were on any family planning method, those seeking any family planning method, those seeking for removal or counseling and those not any were also be recruited.

Exclusion criteria

Those who did not consent were excluded, women living with HIV outside the reproductive age bracket, those from other districts other than Fort portal, those diagnosed during the period of conducting the research.

Research Instruments

The researcher used an interviewer administered questionnaire which were structured and constructed in English. The questionnaire contained both open and closed ended questions which helped the researcher get right opinions and views from women. The questionnaire was arranged according to study objectives organized in sections beginning with general information, socio-demographic and health facility factors that hinder utilization of modern family planning services.

Data Collection Procedure:

Data were collected by using a questionnaire formulated in English containing open and closed ended questionnaire. Questions were translated into the local languages like Rukiga/Runyankole, Rufumbira and Rutooro which the women were able to understand easily in case they didn't understand English. It involved the researcher visiting the hospital Medical superintendent who gave him permission to carry out research then the Researcher was introduced to the clinic staff working in the HIV clinic. After obtaining permission from the in charge, the researcher was introduced to the study participants from whom he selected those to include

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in the study depending on the inclusion criteria. Data were collected by administering questionnaires to the respondents who consented to the interview and meet the inclusion criteria in their local languages and recording the responses in the questionnaire.

Data Management and Analysis

After data collection, all the questionnaires were coded as part of the data cleaning process to eliminate unusable data and incomplete questionnaires. Data entry, storage and analysis was done with Microsoft excel 2010. A coding scheme covering responses to all the questions were developed. The coding scheme facilitated the development of an appropriate data structure to enable its entry and storage in the computer, its readiness for analysis. After all the data was entered into the computer, it was checked and corrected for any errors that is: uniformity, accuracy, consistency, comprehensibility, missing data, double entries to set it ready for analysis. Data was analyzed using Statistical Package for Social Scientists (SPSS) version 16.0 and presented in tables, bar graphs and pie charts. To determine the factors associated with utilization of family planning, Chi square tests were performed and association was confirmed at a p-value less than 0.05 and data was presented in tables and figures.

Ethical Considerations

The researcher obtained an introductory letter from the Head of department of research at Kampala International University that introduced him to the Hospital Medical superintendent to seek permission and assistance in carrying out research. Before interviewing prospective respondents, each respondent was given an explanation on the objectives of the study and was requested to make an informed consent before any information was collected. Before proceeding with data collection, prospective respondents were briefed on the importance, benefits, the process the study would take, the duration so that they were fully informed. Respondents were assured that there were no risks involved in participation in the study, and was also assured of utmost confidentiality, anonymity as well as their right to participate voluntarily and to withdraw from the study without any penalty before interviews started.

RESULTS
Demographic Characteristics

Table 1: Age of the respondents

Age category	Frequency	Percentage
15-19 years	50	13.22
20-29 years	159	42.06
30-39 years	145	38.35
40 and above	24	6.34
Total	378	100.00

With the Majority of the respondents were aged 20-29 years 159(42.1%) as shown in table 1 above.

Table 2: Religion of the respondents

Religion	Frequency	Percentage
Catholic	133	35.18
Protestant	128	33.86
Muslim	98	25.92
Pentecostal	19	5.02
Total	378	100.00

Majority of the respondents 133 (35.18%) were Catholics slightly higher than the protestants 128(33.85%).

Table 3: Marital status of the study respondents

Marital status	Frequency	Percentage
Single	94	24.86
Married	91	24.0
Cohabiting	86	2.75
Widow/divorced	107	28.30
Total	378	100.00

Majority of the respondents were widow/divorced 106(28.30%) and 94(24.86%).were single

Table 4: Level of education of the study respondents

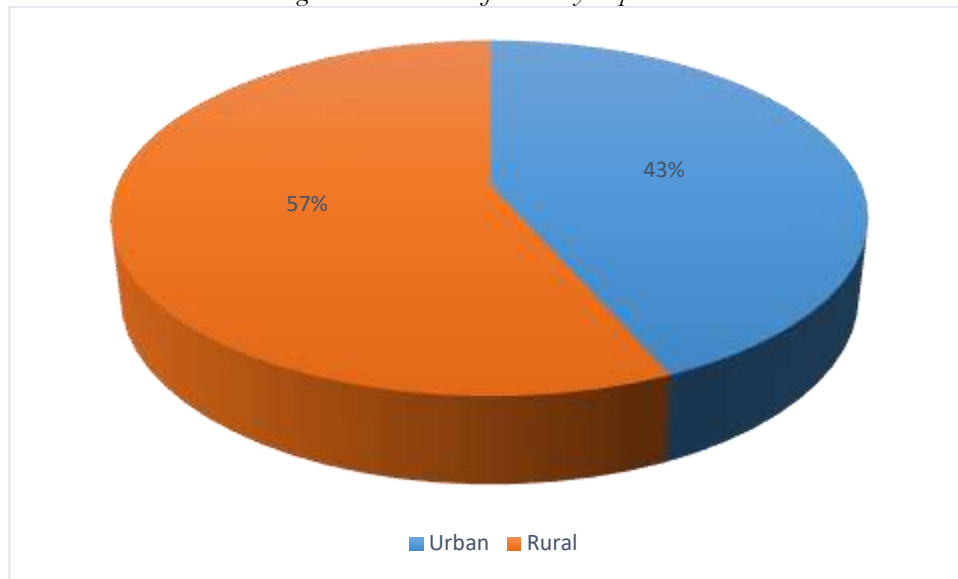
Highest level of education	Frequency	Percentage
No formal education	25	6.61
Primary	174	46.03
Secondary	148	39.15
Tertiary	31	8.20
Total	378	100.00

Most of the respondents had attained primary level of education 174(46.03%) and only8.20 % attained tertiary education.

Table 5: Level of education of spouse

Level of education of spouse	Frequency	Percentage
No formal education	13	3.4
Primary	127	33.59
Secondary	123	32.53
Tertiary	25	6.61
Total	378	100.00

Most of the respondents' spouses had attained primary level of education 127(33.99%) as only 6.61% had tertiary education.

Figure 1: Residence of the study respondents

Majority of the respondents 57% were from rural area and the remaining 43% were from an urban area as shown in figure 1 above

Table 6: Occupation of the respondents

Occupation	Frequency	Percentage
Employed	46	12.16
Self employed	268	70.89
Not employed	25	6.61
House wife	18	4.67
Others	21	5.55
Total	378	100.00

Most of the respondents were self-employed 268(70.89%) and only 5(6.61%) were not employed as in table above.

Level of utilization of modern family planning methods

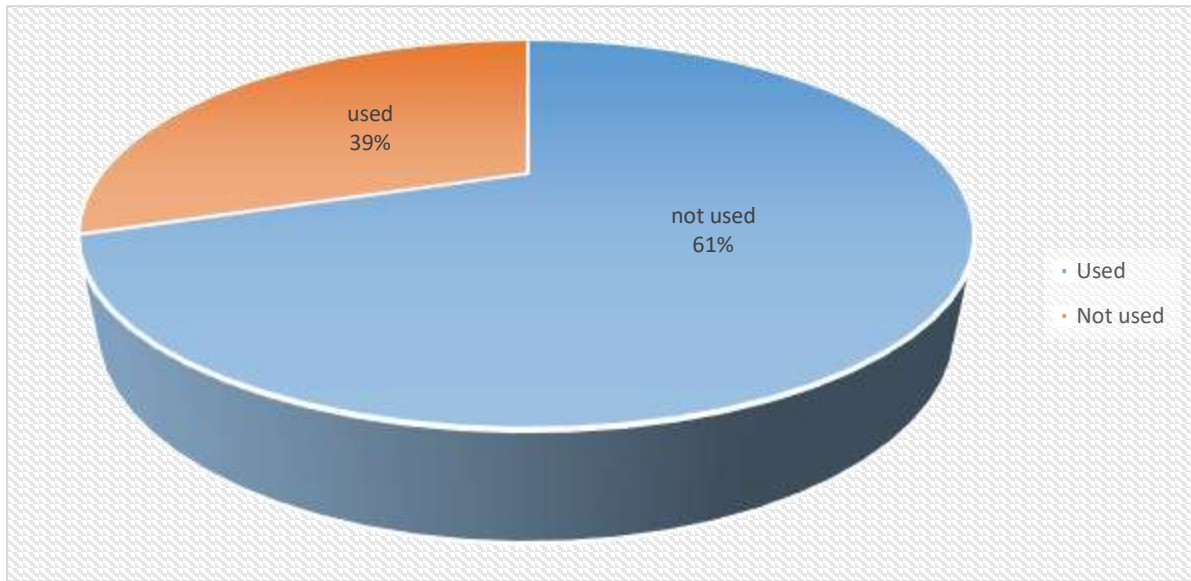


Figure 2: Use of family planning methods in the last 3 months

Majority of the respondents 39%% had used family planning methods in the last 3 months prior to the study with the most commonly used method being

Depo-Provera (injecta plan) 139(56.7%) as shown in table 7 below.

Table 7: Family planning methods used in the last 3 months

Method	Used n(%)	Not used n(%)
Condoms	68(17.9%)	310(82.2%)
Pills	52(13.7%)	36(86.4)
Depo-Provera (injecta plan)	241(56.7%)	137(43.3%)
Implants	11(2.9%)	367(97.3%)
IUD	6(1.6%)	372(98.4%)

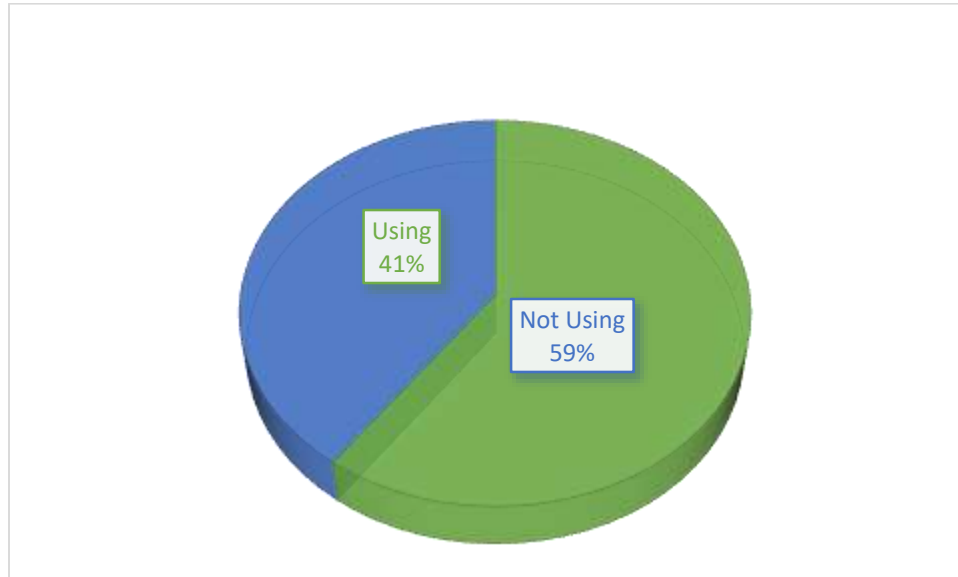


Figure 3: Use of family planning methods currently

More than a half of the study respondents were not currently using family planning (59%) but the remaining 41% were using a family planning and the

methods that were currently being used were being obtained from various sources as in the table 8 below.

Table 8: source for family planning

Sources	Frequency	Percentage
HIV clinic	85	54.83
Family planning Clinic	19	12.25
GYN OPD	25	16.12
GYN WARD	15	9.67
FEMALE MEDICAL WARD	11	9.56
Total	155	100.00

Majority of the respondents obtained family planning methods they were using from HIV clinic and the GYN OPD 85(54.8%) and 25(16.1%) respectively.

Client related factors affecting the utilization of modern family planning

The study found out a statistically significant association between utilization of family planning with age of the respondent, with those of age 30-39 years more likely to use ($X^2 = 21, p=0.000$), religion whereby protestants used family planning more than other groups ($X^2 = 40, p=0.000$), level of education where by clients who had attained formal education were more likely to use family planning than those

who had not ($X^2 = 23, p=0.000$), having children; those who had children used family planning more compared to those without ($X^2 = 4.5, p=0.033$), number of children where by clients with more than 5 children were more likely to use family planning than those with few ($X^2 = 11.5, p=0.003$), age at first pregnancy, the clients who had their first pregnancy at an age of 20 years and older used family planning

more than those who had their first pregnancy at a younger age ($p=0.000$) as shown in table 9 below:

Table 9: Client related factors affecting utilization of modern family planning

Factors	Using n (%)	Not using n (%)	Chi square	P-value
Age				
15-19 years	13(26)	37(74)	24.0	0.000*
20-29 years	62(39)	97(61)		
30-39 years	112(77)	33(23)		
40 and above	13(54)	11(46)		
Religion				
Catholic	64(48.2)	69(51.8)	39.5	0.000*
Protestant	69(53.9)	59(46.1)		
Muslim	49(50)	49(50)		
Pentecostal	8(42.2)	11(57.8)		
Education level				
No formal education	10(740)	15(60)	13.3	0.006
Primary	73(42)	101(58)		
Secondary	97(65.6)	51(34.4)		
Tertiary	26(83.4)	5(16.6)		
Education level of the spouse				
No formal education	6(79.1)	7(20.9)	23.4	0.000*
Primary	64(64.9)	63(35.1)		
Secondary	64(46.5)	59(53.5)		
Tertiary	21(42.9)	10(57.1)		
Occupation				
Employed	17(60.0)	29(40.0)	15.5	0.004*
Self employed	167(60.6)	99(39.4)		
Not employed	15(100.0)	10(0.0)		
House wife	12(42.9)	6(57.1)		
Others	5(33.3)	16(66.7)		
Area of residence				
Urban	88(59.1)	61(40.9)	0.0987	0.753
Rural	113(60.8)	73(39.2)		
Having children				
Yes	201(60.5)	131(39.5)	4.5407	0.033*
No	0(0.0)	3(100.0)		
Number of children				
1-4	129(55.8)	102(44.2)	11.5237	0.003*
5-9	72(71.3)	29(28.7)		
Intention to have more children				
Yes	56(51.4)	53(48.6)	2.5610	0.110
No	121(60.8)	78(39.2)		
Age at first pregnancy				
10-14 years	42(100.0)	0(0.0)	95.2569	0.000*
15-19 years	61(35.1)	113(64.9)		
20 and above years	87(82.9)	18(17.1)		
Taking ARVs				
Yes	183(60.2)	121(39.8)	9.0642	0.011*
No	4(50.0)	4(50.0)		

* Significant at $p<0.05$

Health facility related factors

The study found a statistically significant association between health workers providing information about family planning to the client with those provided with

information more likely to use the family planning compared to the ones who were not given information ($p=0.007$), time taken before receiving the services;

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the less the time the more likely clients were to use family planning methods (p=0.008), stock out of the family planning methods clients who had never experienced stock out were more likely to use family

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planning compared to those who had (p=0.001), distance to the health facility and the means of transport used from home to the health facility as shown in table 10 below;

Table 10: Health facility related factors

Factors	Using n (%)	Not using n (%)	Chi square	P-value
Health workers provide information about family planning				
Yes	146(55.3)	118(44.7)	7.4047	0.007*
No	40(75.5)	13(24.5)		
Time taken before receiving the services				
<30 minutes	108(87.8)	15(12.2)	11.9527	0.008*
>30 minutes	53(94.6)	3(5.4)		
1 hour	10(76.9)	3(23.1)		
> 1 hour	3(50.0)	3(50.0)		
Stock out of the family planning services				
Yes	94(76.4)	29(23.6)	11.1780	0.001*
No	101(57.7)	74(42.3)		
Referral for family planning services				
Yes	97(70.8)	40(29.2)	2.8813	0.090
No	104(61.5)	65(38.5)		
Distance to the health facility				
0-5Km	140(69.3)	62(30.7)	15.4253	0.000*
>5km	61(47.7)	67(52.3)		
Means of transport				
Motorcycle	158(72.2)	61(27.8)	47.5364	0.000*
Taxi	13(23.2)	43(76.8)		
Footing	30(50.0)	30(50.0)		

*Significant at p<0.05

DISCUSSION

Uptake of family planning

With the usage of family planning, 62 % of the respondents had used family planning methods in the last one year prior to the study with the most commonly used method being Depo-Provera 139(56.7%) but only 36% were currently using family planning. This low uptake and the usage of thye modern family planning methods could be attributed to he fact that most of the women of reproductive age were are not married from the study findings. This comes in the same agreement with findings from a review of DHS report from East Asia and the Pacific indicated that adolescent women have lower use of contraception (22%) [11].

Client related factors affecting the uptake of modern family planning

This study drew out a statistically significant link between utilization of the modern family planning methods with age of the respondents; with those of age 30-39 years more likely to use ($X^2=21$, p=0.000) compared to the other age groups. This could be due to the fact that, as most of them had children already

and most of them not being married hence willing to delay pregnancy and childbirth. These findings are consistent with a study conducted in India, that found out that, with the advance in age adoption of family planning increases with women more than 25 years (69.5%) were more frequently using contraceptives [12].

Religion was not found to influence the utilization of family planning whereby the protestants and the Catholics used family planning averagely not outraging the other ($X^2=40$, p=0.06). This could be attributed to the fact that religion has little influence on the number of children to couples for example the Catholics per say. However this is not in the agreement with some study findings like Ekorinyang and Richard [13] who found out that in Western Uganda, Catholics were less likely to use family planning than Protestants and Muslims.

In many studies the level of education has been found to influence decision making on many aspects of life and so did this study; where by clients who had attained formal education were more likely to

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use family planning than those who had not ($X^2=23$, $p=0.000$) which could be as a result of being aware of the benefits of using family planning and the dangers of not using. This is agreeing with a study carried out in Nairobi, Kenya which revealed that Educational level was positively associated with utilization of modern family planning services as people with higher education status were likely to go for family planning services compared to their counterparts with lower education [14].

In this study, women who had children used family planning more compared to those without ($X^2=4.5$, $p=0.033$) and number of children where by clients with more than 5 were likely to use family planning than those with few ($X^2=11.5$, $p=0.003$). This implies that such clients have already produced a number of children they want and they can therefore either stop or delay pregnancy and childbirth using modern family planning. Todd et al., [15] also in their study on factors associated with contraceptive use among hospitalized obstetric patients irrespective of their HIV status reported that contraceptive use was independently associated with having a greater number of living children (AOR=1.30, 95% CI: 1.20 – 1.41).

Regarding age at first pregnancy, the clients who had their first pregnancy at an age of 20 years and older used family planning more than those who had their first pregnancy at a younger age ($p=0.000$) and this could be due to the fact that they have already delayed pregnancy and childbirth either by use of family planning or other means so continuing is much easier in such a group of people compared to the other groups. Age at first birth is a key indicator of many maternal outcomes including mortality therefore mothers should delay pregnancy and childbirth. This agrees with a study carried out in Kitagata hospital which found out that, age at first pregnancy had an association with practicing family planning; that is age > 20 years were practicing modern family planning better than those whose age < 18 years [16].

Health facility related factors

There was a statistically significant relation between health workers sensitizing the clients about the modern family planning services, with those who were provided with information more likely to use family planning compared to the ones who were not given information ($p=0.007$). This is due to the fact that such clients who are provided with information are aware and they are likely to demand, use and

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sustain the use of family planning compared to those who are un aware. These findings agree with a study in Brazil which found out that HIV positive women were not able to make informed choice on reproductive health in general because they were given very little information on the subject [17] who also found out that poorer knowledge of family planning and less access to information services among adult women were mentioned to be one of the problems leading to low utilization of family planning services among adolescent girls [11].

Waiting time taken before receiving the services also influenced the utilization of family planning where by the less the time the more likely clients were to use family planning methods ($p=0.008$). Short waiting time at health facilities increases client satisfaction with all the health services provided, therefore shortening waiting time could further increase utilization of family planning in particular. The findings are in line with a study carried out in Mayuge, Iganga district which showed that long waiting time, together with unofficial fees in public sectors and limited quality of information during care were among the factors influencing modern family planning services [18].

Stock out of family planning methods also had a significant effect for example, clients who had never experienced stock out were more likely to use family planning compared to those who had ($p=0.001$). This could be due to the disappointment clients get on reaching the health facility and they are told there are no services and some of these clients have to travel long distance and spend on transport. Namazzi, [18] also found out that inadequate family planning supplies at the health facility was associated with non-use of family planning in Mayuge and Iganga Districts in Uganda.

Distance to the health facility and the means of transport used from home to the health facility were found to influence utilization of family planning with clients from a distance less than 5km more likely to use family planning compared to their counter parts from long distances which limits access especially if they are from rural areas as reported in a study carried out in Kenya which found out that, access to family planning services is vital as it was found that the married women in urban settings were twice as likely to use family planning more than those in the rural areas and women who lived closer to facilities were found to use modern family planning methods compared to those who had to walk for hours.

CONCLUSION

In general, the uptake and usage of the modern family planning methods was low with only 36% were currently using modern contraceptive family

planning methods. Level of education, Age of an individual, having children, number of children and age at first pregnancy were significantly found to

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have a great association with the uptake and usage of the modern family planning.

The study also found a statistically significant association between health workers providing information about family planning to the clients,

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waiting time taken before receiving family planning services, stock out of the family planning supplies, and distance to the health facility as well as the means of transport used from home to the health facility.

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