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Publications 2023

OPEN ACCESS
ONLINE ISSN: 2992-5460
PRINT ISSN: 2992-6041

NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES (NIJRMS)
Volume 4 Issue 1 2023

Factors Affecting Utilization of Modern Family Planning Services among Women of Reproductive Age Living with HIV/AIDS Receiving Care from Rukunyu Hospital, Kamwenge District

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ABSTRACT

Family planning (FP) is a voluntary and informed decision by an individual or couple on the number of children to have and when to have them, by use of modern or natural methods. In sub-Saharan Africa, people living with HIV/AIDS (PLWHA) get unplanned pregnancies and experience negative effects of pregnancy on their health, which leads to poor obstetric outcomes, progression of HIV, and new vertical pediatric HIV infections. Effective utilization of FP services by PLWHA can help address such emerging public reproductivehealth concerns and overall improve maternal and child health outcomes in general. This study determined factors that affect the utilization of modern family planning services among women of reproductive age living with HIV/AIDS receiving care at Rukunyu Hospital, Kamwenge District. A descriptive cross-sectional study was carried out in Rukunyu Hospital HIVclinic, Kamwenge District involving 309 women of reproductive age. Data was collected using a structured researcher-administered questionnaire and analyzed using SPSS version 16.0. Approximately 60% (212) of women of reproductive age living with HIV were using modern contraceptives. The majority of respondents were aged 20-29 years (50.6 %), andcommonly used injectables (56.7%) from the hospital family planning clinic (47.3%). Protestant women who had more than four children, completed tertiary education and those who had been counseled about family planning were more likely to utilize modern family planning methods than their counterparts in other religious faith and social categories. There were low levels of utilization of contraceptives, with injectables as the most used method, and family planning counseling was associated with increased contraceptive uptake among women with HIV. More efforts are needed to sensitize and provide modern contraceptives targeting the illiterate, youth under 20 years, and believers from different religious sects to increase utilization among women of reproductive age living with HIV.

Keywords: Family planning, unplanned pregnancies, HIV/AIDS, Maternal death, Health outcomes.

INTRODUCTION

Family planning (FP) is a voluntary and informed decision by an individual or couple on the number of children to have and when to have them, by use of modern or natural methods. It can also be simply referred to as having children by choice and notby chance. Modern FP methods commonly available include oral contraceptives, Depo-Provera injections, Implants, condoms, diaphragms, Intra-uterine Devices (IUD,) and voluntary sterilization (vasectomy and tubal ligation). The traditional methods consist of the

Lactational Amenorrhea Method (LAM) and Fertility Awareness Based Methods (FAB) [1, 2]. Current guidance from WHO indicates that virtually all these methods are safe for nearly every person with HIV [3]. Family planning has been cited as essential to the achievement of Sustainable DevelopmentGoals (SDG) goals 3 and 5 and is an important indicator for tracking progress. Globally, family planning services are an essential element of reproductive health care and have saved lives and protected the health of millions of women and children [4]. However, family planning services are facing a complicated process, entangled in social, political, moral, and cultural networks in many African countries, including Uganda. Uganda is among the sub-Saharan African countries with the highest total fertility rate at 5.4 births per woman [5]. About 21 million women in developing countries become pregnant every year, and nearly half of these pregnancies (49%) are unintended. And 38 million 15-19-year-old adolescent girls are at risk of pregnancy but do not want a child in the next two years, but only 40% are using a modern method of contraception [3]. HIV remains the leading cause of death among women of reproductive age and HIV infection among children has mainly been through Mother-To-Child-Transmission (MTCT) with nearly 16 million women living with HIV with 1.4 million pregnant women at risk of passing along HIV to their child each year [6, 7]. Globally, there are an estimated 34 million people living with HIV/AIDS. Africa and Sub-Saharan Africa in particular have peculiar needs for both HIV and Family planning (FP) services. The majority (68%) of people living with HIV/AIDS (PLWHA) are in Sub-Saharan Africa. The prevalence is higher among individuals of reproductive age group with young women being the most vulnerable [8-10].

Despite the availability of free family planning services at various Health center levels in Uganda and Kamwenge District in particular, the rate at which the services are utilized has remained low at 43.3% which is short of the WHO recommended of 100% [5]. Uganda has one of the world's highest maternal mortality rates of 336 deaths per 100,000 live births; that is, for every 1,000 births in Uganda, there are over 3 maternal deaths, and the unmet need for family planning of 28% among married women [5]. Globally, approximately 1.4 million women living with HIV become pregnant every year and most women use antiretroviral therapy, to reduce the risk of vertical transmission or forpersonal health reasons [11]. As a core prong and strategy for PMTCT, prevention of unintended pregnancy among HIV-positive women has been neglected. Many HIV-infected women are sexually active and increase or resume sexual activity as their health improves whilst on antiretroviral therapy (ART). The prevention of unintended pregnancies among HIV-positive women is a critical step towards reducing mother-to-child transmission and is a core component of international standards for a comprehensive approach to the prevention of mother-to-child transmission of HIV (PMTCT) [12]. Women who want to avoid unintended pregnancies can do this by using modern contraceptive methods safely and effectively with variations in method preference [13]. At Rukunyu Hospital, only 34% of the mothers of reproductive age who are HIV- positive are using contraceptives, the commonest method used to be injectables at 74% [14]. This study assessed factors that affect the utilization of modern family planning services especially among HIV/AIDS clients of the reproductive age receiving care from Rukunyu Hospital Kamwenge District.

METHODOLOGY

Study Design

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

Area of Study

The study was conducted at Rukunyu General Hospital. It is located in Rukunyu town council, Kamwenge district, Western Uganda. It is situated approximately 15 km from Kamwenge town along Fort Portal Road. It's a general district hospital that was operationalized in July 2019. It serves a population of about 400,000 people from constituencies of Kibale, Kibale East, and the newly created Kitagwenda district. The hospital has been working as a health Centre IV till July 2019 when it began working as a District General Hospital following the government upgrading it to general hospital status. As for now, the hospital has a bed capacity of 100 beds with 4 wards but the in-patient capacity overwhelms the hospital's available facilities causing many people to sleep on the floor and veranda. The hospital offers preventive, curative, and surgical services and has medical, pediatric, gynecology, and obstetrics wards and a surgical ward as well as an operating theatre. It also has the outpatient department (OPD) and Antenatal care (ANC), services for pregnant mothers, and the reproductive health clinic which is part of the MCH clinic. The hospital was considered as the area of the study due to the fact that it is a district general Hospital and it has the highest number of HIV clients of all ages, as well as a Family planning clinicwhich made it easy for the researcher to achieve the sample size in time.

Study Population

The study was comprised of women of reproductive age attending HIV clinic at Rukunyu Hospital.

Sample Size Determination

The sample size was determined from the formula by Kish Leislie (1965) 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, [5]).

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

$n =$

$$\frac{1.962\ 0.4338(1 - 0.4338)}{0.052}$$

$n = 378\ women$

Therefore, the sample size is 378 respondents

Sampling Procedure

Purposive sampling was carried out to select the HIV clinic since this was the only place where the studyparticipants could be obtained. A simple random method was used to select the study participants in whichpieces of paper were written on with words YES and NO, put in a box, shaken thoroughly and then the clients available on the day of data collection were allowed to pick a paper and all those who picked a paper with YES were interviewed until the sample size was reached.

Inclusion and exclusion Criteria

The study included women of reproductive age who consented to participate in the study while women outside the reproductive age, and those who did not consent were excluded.

Dependent variables: Utilization of modern family planning methods among women attending the HIV clinic at Rukunyu Hospital.

The independent variables: Were the socio-demographic, client-related factors, and healthfacility-related factors that hinder the utilization of modern family planning services.

Research Instruments

The researcher used an interviewer-administered questionnaire which was structured and constructed in English. The questionnaire contained both open and closed-ended questions which helped the researcher to get the 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 questionnaires. 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's 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 those in charge, the researcher was introduced to the study participants from whom he selected those to include in the study depending on the inclusion criteria. Data were collected by administering questionnaires to the respondents who consented to the interview and met 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 were donewith Microsoft Excel 2010. A coding scheme covering responses to all the questions was developed. The coding scheme facilitated the development of an appropriate data structure to enable its entry and storage in the computer, and 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, and double entries to set it ready for analysis. Data were 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 the utilizationof family planning, Chi's square tests were performed and the 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 the department of research at Kampala International University introducing 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 of the objectives of the study and requested to make informed consent before any information was collected. Respondents were assured that there were no risks involved in participation in the study, and were 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	20	5.68
20-29 years	178	50.57
30-39 years	122	34.66
40 and above	32	9.09
Total	352	100.00

The majority of the respondents were aged 20-29 years 178(50.6%) and only 5.68% were aged 15-19years as shown in table 1 above.

Table 2: Religion of the respondents

Religion	Frequency	Percentage
Catholic	189	53.69
Protestant	100	28.41
Muslim	28	7.95
Pentecostal	35	9.94
Total	352	100.00

More than a half of the respondents 189(53.7%) were Catholics as only 28(7. 9%).were Muslims

Table 3: Marital status of the study respondents

Marital status	Frequency	Percentage
Single	94	26.70
Married	105	29.83
Cohabiting	109	30.97
Widow/divorced	44	12.50
Total	352	100.00

Majority of the respondents were cohabiting 109(30.9%) and 44(12. 5%) were widows or divorced

Table 4: Level of education o-f the study respondents

Highest level of education	Frequency	Percentage
No formal education	133	37.89
Primary	134	38.18
Secondary	65	18.52
Tertiary	19	5.41
Total	351	100.00

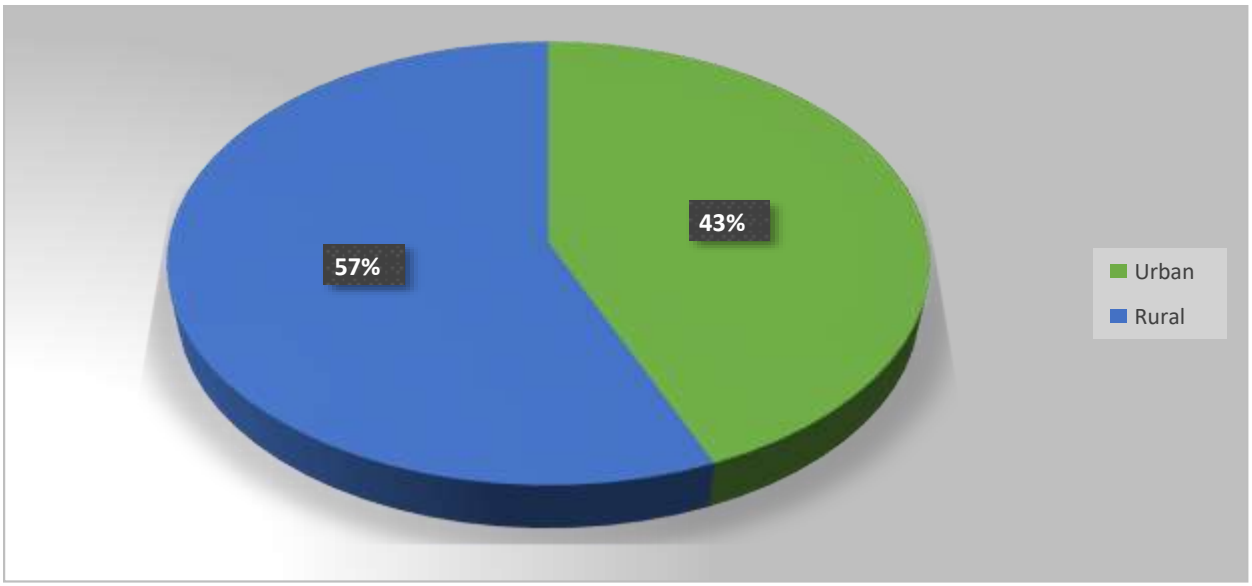
Most of the respondents had attained a primary level of education 134(38.2 and only 5.41% attainedtertiary education.

Table 5: Level of education of spouse

Level of education of spouse	Frequency	Percentage
No formal education	68	19.32
Primary	139	39.49
Secondary	110	31.25
Tertiary	35	9.94
Total	352	100.00

Most of the respondents' spouses had attained a primary level of education 139(39.5%) as only9.94% 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 urbanarea as shown in figure 1 above.

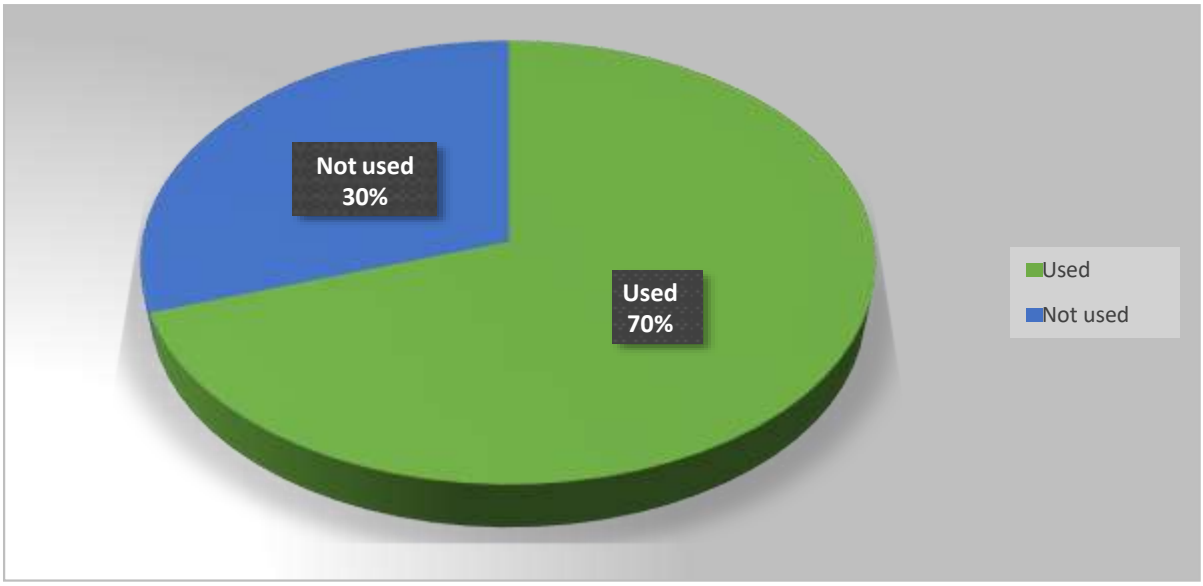
Table 6: Occupation of the respondents

Occupation	**Frequency**	**Percentage**
Employed	18	5.11
Self employed	279	79.26
Not employed	14	3.98
House wife	28	7.95
Others	13	3.69
Total	352	100.00

Most of the respondents were self-employed 279(79%) and only 14(4%) were not employed as intable above.

Level of utilization of modern family planning methods

Figure 2: Use of family planning methods in the last one year

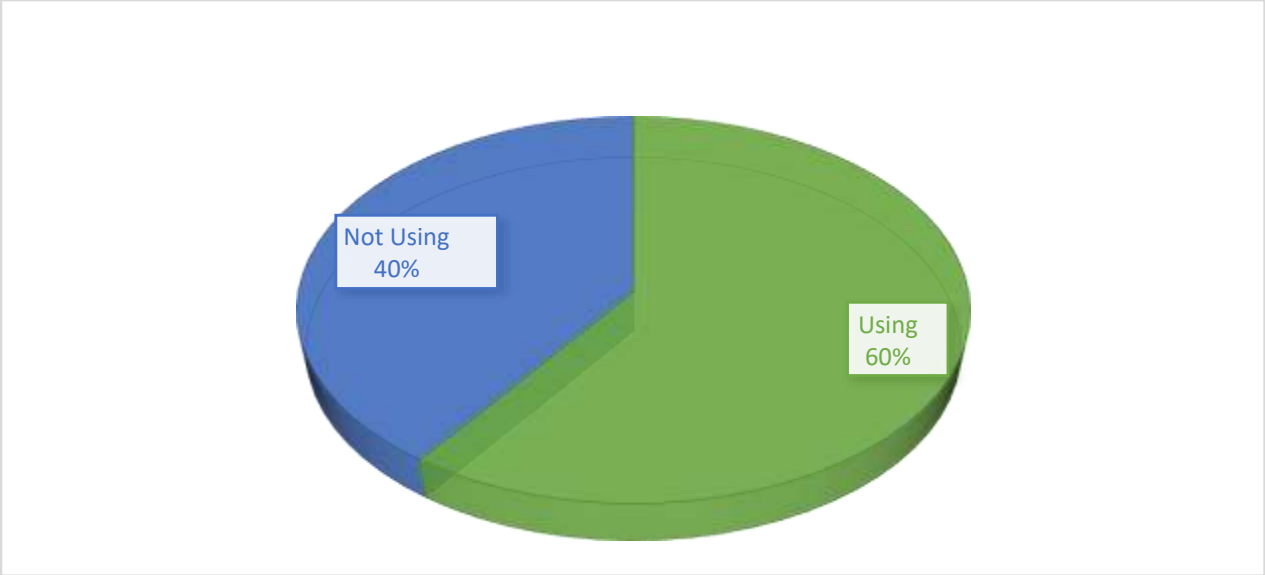


Majority of the respondents 70% had used family planning methods in the last one year prior to the study with the most commonly used method being Depo-Provera (injecta plan) 139(56.7%) asshown in Table 7 below.

Table 7: Family planning methods used in the last one year

Method	Used n(%)	Not used n(%)
Condoms	22(9.0)	222(91.0)
Pills	13(5.3)	231(94.7)
Depo-Provera (injectable)	139(56.7)	106(43.2)
Implants	74(30.3)	170(69.7)
IUD	22(9.2)	216(90.8)

Figure 3: Use of family planning methods currently



More than a half of the study respondents were currently using family planning (60%) but the remaining 40% were not using family planning and the methods that were currently being used were being obtained from various sources as in the table 8 below.

Sources	Frequency	Percentage
HIV clinic	19	9.45
Family planning Clinic	95	47.26
Private clinic	84	41.79
Others	3	1.49
Total	201	100.00

The majority of the respondents obtained family planning methods they were using from Family Planning Clinics and Private clinics 95(47.3%) and 84(41.8%) respectively.

Client-related factors affecting the utilization of modern family planning

The study found out a statistically significant association between the utilization of family planning and with age of the respondents, with those aged 20-29 years more likely to use (X^2 =21, p=0.000), the religions whereby protestants used family planning more than other groups (X^2 =40, p=0.000), levelof education whereby 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 usedfamily planning more compared to those without (X^2 =4.5, p=0.033), number of children whereby 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 youngerage (p=0.000) as shown in table 8 below:

Table 8: Client-related factors affecting the utilization of modern family planning

Factors	Using n(%)	Not using n(%)	Chi-square	P-value
Age				
15-19 years	3(15)	17(85)		
20-29 years	76(66.7)	38(33.3)	21.0	0.000*
30-39 years	99(58.6)	70(41.4)		
40 and above	23(71.9)	9(28.1)		
Religion				
Catholic	84(45.2)	102(54.8)	40.5	0.000*
Protestant	77(79.4)	20(20.6)		
Muslim	19(67.9)	9(32.1)		
Pentecostal	21(87.5)	3(12.5)		
Education level				
No formal education	93(71.5)	37(28.5)	12.3	0.006
Primary	65(51.2)	62(48.8)		
Secondary	32(55.2)	26(44.8)		
Tertiary	10(52.6)	9(47.4)		
Education level of the spouse				

No formal education	53(79.1)	14(20.9)	23.4	0.000*
Primary	87(64.9)	47(35.1)		
Secondary	46(46.5)	53(53.5)		
Tertiary	15(42.9)	20(57.1)		
Occupation			15.5	0.004*
Employed	9(60.0)	6(40.0)		
Self employed	163(60.6)	106(39.4)		
Not employed	14(100.0)	0(0.0)		
House wife	12(42.9)	16(57.1)		
Others	3(33.3)	6(66.7)		
Area of residence			0.0987	0.753
Urban	88(59.1)	61(40.9)		
Rural	113(60.8)	73(39.2)		
Having children			4.5407	0.033*
Yes	201(60.5)	131(39.5)		
No	0(0.0)	3(100.0)		
Number of children			11.5237	0.003*
1-4	129(55.8)	102(44.2)		
5-9	72(71.3)	29(28.7)		
Intention to have more children			2.5610	0.110
Yes	56(51.4)	53(48.6)		
No	121(60.8)	78(39.2)		
Age at first pregnancy			95.2569	0.000*
10-14 years	42(100.0)	0(0.0)		
15-19 years	61(35.1)	113(64.9)		
20 and above years	87(82.9)	18(17.1)		
Taking ARVs			9.0642	0.011*
Yes	183(60.2)	121(39.8)		
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 likelyto use the family planning compared to the ones who were not given information (p=0.007), timetaken before receiving the services; 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 planning compared to those who had (p=0.001), distance to the health facility and the means of transport used from home to the healthfacility as shown in table 9 below;

Table 9: Health facility-related factors

Factors	**Using n(%)**	**Not using n(%)**	**Chi-square**	**P-value**
Health workers provide information about family planning			7.4047	0.007*
Yes	146(55.3)	118(44.7)		
No	40(75.5)	13(24.5)		
Time taken before receiving the services			11.9527	0.008*
<30 minutes	108(87.8)	15(12.2)		
>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			11.1780	0.001*
Yes	94(76.4)	29(23.6)		
No	101(57.7)	74(42.3)		
Referral for family planning services			2.8813	0.090
Yes	97(70.8)	40(29.2)		
No	104(61.5)	65(38.5)		
Distance to the health facility				

0-5Km	140(69.3)	62(30.7)		
>5km	61(47.7)	67(52.3)	15.4253	0.000*
Means of transport			47.5364	0.000*
Motorcycle	158(72.2)	61(27.8)		
Taxi	13(23.2)	43(76.8)		
Footing	30(50.0)	30(50.0)		

Significant at p<0.05

DISCUSSION

Utilization of family planning

Regarding utilization of family planning, the majority of the respondents (70%) had used family planning methods in the last year prior to the study with the most commonly used method being Depo-Provera 139(56.7%) but only 60% were currently using family planning. This is lowsince all women of reproductive age should use family planning if they wish to delay pregnancyand childbirth and this could be due to the fact that most of them are not married. This is not in agreement with findings from a review of DHS reports from East Asia and the Pacific indicating that adolescent women have lower use of contraception (22%) [15].

Client-related factors affecting the utilization of modern family planning

This study showed a statistically significant association between utilization of family planning and with age of the respondents; with those aged 20-29 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 they are willing to delay pregnancy and childbirth given that they are at the peak of their reproductive age. These findingsare consistent with a study conducted in Bangladesh, that found that, with the advance in age adoption of family planning increases and women were more frequently using contraceptives [16]. Religion was also found to influence the utilization of family planning whereby protestants usedfamily planning more than other religious groups (X^2 =40, p=0.000). This could be attributed to the fact that modern family planning is discouraged in some religions, especially the Catholic Church. These findings are in agreement with Ekorinyang [17] who found out thatin 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 clients who had attained formal education were more likely to 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 agrees with a study carried out in Talensi, Ghana which revealed that educational level waspositively associated with the 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 [18]. In this study, women who had children used family planning more compared to those without (X^2=4.5, p=0.033), and the number of children with more than 5 were more 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.* [19] also in their study on factors associated with contraceptive use among hospitalized obstetric patients irrespective oftheir 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 the 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 modernfamily planning better than those whose age < 18 years [20].

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 likelyto 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 likelyto demand, use, and sustain the use of family planning compared to those who are unaware. Thesefindings agree with a study in Brazil which found out that HIV- positive women were not able to make an informed choice on reproductive health in general because they were given very little information on the subject [21]. Kennedy *et al.* [15] also found out that poorer knowledge of family planning and less access to information services amongadult women was mentioned to be one of the problems leading to low utilization of family planning services among adolescent girls [15]. 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 times, together with unofficial fees in public sectors and limited quality of information during care were among the factors influencing modern family planning services [22-25]. 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 distances and spendon transport. Namazzi, [22] also found out that inadequate family planning supplies at the health facility were associated with the non-use of family planning in Mayuge and Iganga Districtsin 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 counterparts 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 [23-25].

Conclusions

Utilization of family planning methods among the study participants was generally low only 60%were currently using modern contraceptive family planning methods. The study found a statistically significant association between utilization of family planning with the age of the respondents, religion, level of education, having children, number of children, and age at first pregnancy. The study also found a statistically significant association between health workers providing information about family planning to the clients, 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.

Recommendations

Results showed that Catholics were significantly less likely to be using FP methods compared toProtestants and other religious domains. The Catholic Church should encourage the Catholics to start using natural Family Planning methods and this can be done through massive sensitization of communities, radio spots, and radio talk shows. The result showed that HIV-positive women who never went to school were less likely to use FP. There should be community sensitization among female clients who have completed primary education and those below the primary level. In addition, the government should consider involving FPeducation sessions in the primary education curriculum. Findings from this survey revealed that women who lived closer to the facility used FP methods more than their colleagues who had to walk for an hour or more. Government should try to equip lower health facilities like health centers with FP services and the MOH should develop a policy on VHTs distributing FP methods to their communities to improve access. Findings show a significant association between waiting time and FP use. There is a need for MOH toequip health facilities with adequate numbers of health workers to ensure that these clients are attended to in time.

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