BARRIERS TO UPTAKE OF LONG TERM AND PERMANENT FAMILY PLANNING METHODS AMONG HIV INFECTED POSTPARTUM MOTHERS IN KENYATTA NATIONAL HOSPITAL

A dissertation submitted in partial fulfillment for the award of degree of Master of Medicine in Obstetrics and Gynaecology of the University of Nairobi

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DEDICATION

This book is dedicated to my late parents and my family for their sacrifice and support to give me the best education.

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OPERATIONAL DEFINITIONS

Unmet need for FP: Occasions on which mothers in the reproductive age group seek health care and are in contact with a health care provider but lose the chance of receiving family planning services(including counseling and provision of methods).

Contraceptive prevalence rate: Is the percentage of currently married women aged 15-49 years who are using any method of family planning.

LIST OF ABBREVIATIONS

(i) AIDS -Acquired Immunodeficiency Syndrome

(ii) ART - Antiretroviral Therapy

(iii) BTL -Bilateral Tubal Ligation

(iv) CCC -Comprehensive Care Clinic.

(v) CS -Caesarian Section

(vi) FP -Family Planning

(vii) HIV -Human immunodeficiency Virus

(viii) IUCD- Intrauterine Contraceptive Device

(ix) KAIS- Kenya Aids Indicator Survey

(x) KDHS- Kenya Demographic Health Survey

(xi) KNH- Kenyatta National Hospital

(xii) LDC- Least Developed Countries

(xiii) LTCM- Long Term Contraceptive Methods

(xiv) MSMs- Men having Sex with Men

(xv) NNRTI- Non-Nucleoside Reverse Transcriptase Inhibitor

(xvi) NRTI -Non-reverse Transcriptase Inhibitor

(xvii) PI - Protease Inhibitors

(xviii) PNC - Post Natal Clinic

(xix) SVD -Spontaneous Vertex Delivery

(xx) WHO- World Health Organization

(xxi) UON – University of Nairobi

(xxii) PMTCT – Prevention of Mother To Child Transmission

(xxiii) UNFPA – United Nations Population Council

(xxiv) TFR – Total Fertility Rate

ABSTRACT

Introduction

Family planning is a key component of prevention of mother to child transmission of HIV and reduction of maternal morbidity and mortality. While most health facilities in Kenya provide long term and permanent methods of family planning, the long term and permanent family planning prevalence is still low and especially among the HIV positive patients. Post-partum visit at sixth week provides an opportunity to counsel and provide LTCM to the mothers. This study was therefore conducted to assess both client and facility factors that contribute to missed opportunities for LTCM uptake among HIV infected post-partum women at sixth week visit in order to inform policy and design interventions that can improve uptake.

Objective of the study

The objective of the study is to determine factors that hinder uptake of LTCM by HIV infected postpartum women attending PNC at the KNH.

Methods

A facility based descriptive cross sectional study was conducted at the HIV postpartum clinic at KNH using quantitative method of data collection from March 2013 to July 2013. An exit questionnaire was used for interviews after the mothers had been attended to by the clinician. A total of 103 HIV infected postpartum mothers were interviewed. The mothers were interviewed on family planning information, counseling during pregnancy, child birth, post natal period and their socioeconomic and clinical characteristics.

Quantitative data was analyzed using SPSS version 17.0. Odd's ratios, 95% confidence intervals and p value set at 0.05 were used to determine statistical significance of the associations between independent variables and preference for LTCM. Qualitative data was coded and analyzed using content thematic analysis.

Results

The postpartum uptake of LTCM by HIV infected postpartum mothers attending postpartum clinic at sixth week visit was only 0.97%. However 41.7% of the mothers had preference for long term contraceptive methods. Older age (p value =0.05) and knowledge of the HIV status of the spouse (p value= 0.002, OR 3.8(1.6-8.9) were significantly associated with preference for uptake of LTCM. Barriers to LTCM use included low rate of counseling amongst mothers attending the postpartum clinic as only 7.8% of the mothers were counseled by the clinician during the sixth postpartum visit. Other barriers included failure to provide LTCM services in the same setting as the postpartum clinic and 58.3% of the mothers' preference for barrier methods.

Conclusion

The low rate of family planning counseling by clinicians, patient preference for barrier methods especially condoms, and lack of integration of FP services with HIV postpartum clinic services at the HIV postpartum clinic lead to missed opportunities for long term and permanent family planning methods uptake. One on one clinician counseling with HIV infected postpartum mothers on LTCM could enhance accurate information on FP. This would reduce the perceptions on LTCM hence improve their uptake.

Recommendations

There is need to integrate family planning services and maternity services at KNH. Measures should be put in place to use flip charts for patient education on long term family planning methods. Also, there is need to introduce a check list on what the patients are to be advised on in the HIV postpartum clinic to minimize missed opportunities for LTCM use by clinicians. Nevertheless, health education to patients is required to remove the perception that when one is using barrier methods especially condoms, one does not require a LTCM. Finally, disclosure of HIV status to the partner should be encouraged.

1.0: BACKGROUND AND LITERATURE REVIEW

There has been intense research in the field of HIV care in the past one decade. This has resulted into development of life prolonging ARV drugs used in combination thus transforming the once terminal disease to another chronic disease. Additionally, there are guidelines of treatment of various categories of patients which have been integrated into the national healthcare policies.

While this has achieved less morbidity and mortality from HIV and HIV related co-morbidities, there still remains one group of patients that had drawn a considerable attention. These are the women in reproductive age and the pregnant women. The key to primary prevention is ensuring minimal vertical transmission from the mother to the baby.

Thus, the women who test positive for HIV during pregnancy or those who already are sero-status positive prior to pregnancy must be guided and encouraged to take up contraceptive methods to prevent unwanted pregnancy, space their families and reduced the compounded risk of pregnancy and HIV.

This study focuses on the HIV positive post-partum women at KNH and the factors that hinder or influence their use of long term contraceptive methods.

The population of the world currently stands at seven billion people. Out of these, approximately 250 million do not have the means to control their fertility [1]. This makes access to family planning services together with contraception critical. Mothers are exposed to high

morbidity and mortality during pregnancy and child birth if the pregnancies are too early, too close, too many or too late [2].

Family planning services are defined as educational, comprehensive medical or social activities which enable individuals, including minors to determine freely the number and spacing and timing of their children and to select the means by which this may be achieved [3]. The mother's health, wellbeing as well as outcome of each pregnancy depend on the ability of the woman to limit and space her pregnancies [3]. Fifty percent of all maternal mortality in the developing world could be addressed through family planning services [4]. Family planning service provision and information frees up scarce resources that could be used to provide universal access to maternal and newborn care [5].

The World Health Organization (WHO) defines modern contraception to encompass the use of any of the following methods for pregnancy prevention: female sterilization, oral contraceptive pill, intrauterine contraceptive device (IUCD), implants, depo provera or condoms[3].

Two thirds of people living with HIV/AIDS reside in sub Saharan Africa, 60% of whom are women [6]. This pattern is reflected in Kenya whose HIV prevalence is 6.3% [7]. Data from demographic and health surveys from Sub Saharan countries show that the proportion of women currently using long term family planning methods (LTFPM) is significantly lower than the proportion using short term methods[8] . LTFPM has either stagnated or declined over the past two decades. In many countries in the region, fewer than 5% of women who are using contraception are using LTFPM[9]. Family planning has been known to reduce maternal

mortality by over 30%. If all the unmet need was addressed, perinatal infant mortality would be reduced by 50%, reduce perinatal HIV infection and to enable women to access and take up empowering socio-economic activities if pregnancy could be planned[10.] African countries have an average total fertility rate of 5.1, which is the highest in the world. It is higher than that of South Asia which is at 2.8 [11]. The contraceptive prevalence rate for Sub Saharan Africa is 22% and that of South Asia is 53%. As a result, the maternal mortality ratio of 500/100,000 live births is still high. Most Sub Saharan countries including Kenya are not on track to achieve Millennium Development Goal 5 [12].

In Kenya, the MMR is currently at 488/100,000 live births [7]. The total fertility rate in Kenya is 4.6 children per women. The contraceptive prevalence rate amongst married women is at 46% while those using modern contraception stands at 39%. Only 6% are using traditional methods[7].

Long term family planning methods work for months, years or a lifetime. Generally, these include implants, intrauterine devices and sterilization (tubal ligations in women and vasectomy in men) [13]. They do not require regular actions such as taking pills, using condoms or other applications; hence their success rate even with typical use is very high[14]. Beyond the appointments they require with healthcare providers, long term family planning methods require little effort on part of users. Yet they are among the most highly effective of all birth control methods. When used correctly and consistently, all of them are over 95% successful in preventing pregnancy.[15]

The UNFPA has devoted a lot of resources in promoting use of modern family planning methods in order to prevent unwanted pregnancies and reduce maternal morbidity and mortality. In spite of all these efforts, the contraceptive prevalence rate remains dismally low [16]. In the most developed countries of the world, the accessibility and acceptability of contraceptive methods is high compared to the Least developed countries (LDCs)[17]. In addition to these, there is a high prevalence of unwanted pregnancies and morbidities resulting from post abortal complications. This is one single factor that has contributed to extremely high numbers of maternal mortality indices[18]. At any given time, majority of women use short term methods of contraception. During the year 2007, 41% of family planning users globally relied on long term methods, both reversible and irreversible ones[19].

Before the anti- retroviral therapy (ART) era, lack of treatment increased morbidity and mortality among HIV infected patients [20]. HIV has now become a chronic illness due to availability of combination ART (cART). With HIV infected women living longer, there is increased need to address their FP needs [21]. It is known that with individualized care, HIV infected patients can use any contraceptive method. Studies have found that when provided with access and information about FP, HIV infected patients increase their use of contraception[22].

A longitudinal study conducted in Bali and Singapore showed that up to 30% of married women who expressed interest in ending child bearing had an unwanted pregnancy in the first 4 years of follow up. At highest risk of conceiving were women with fewer children, the very young, those not on long term methods, and those who lacked of relevant information. This

study showed a strong association between level of education and the choice of long term contraceptive methods and in turn less incidence of unwanted pregnancies [23].

In the Jakarta Modular Survey study of 1982, the characteristics selected included age, respondent's education, husband's education, working status of the respondent, age at first marriage, number of living children, and experience of abortion. These variables were considered to be associated with use and nonuse of contraceptives. Compared to the nonusers, the current users were slightly older in age more educated (and had husbands who were more educated), were older when first married, had more living children, and had more experience in abortion. This study concluded that there were four independent major factors affecting the use and nonuse of contraception: number of living children, frequency of exposure to mass media, level of education, and current age. There also was a relationship among the following factors: age with number of living children and with media exposure; number of living children with level of education; and education with media exposure and with age. Although the experience of abortion did not affect contraceptive use, it was strongly associated with age. Among these four factors, education had the strongest effects, followed consecutively by number of living children, current age, and media exposure[24].

A study in Nigeria established a remarkable increase in the uptake of contraceptives from an initial baseline of 28-35% in the age bracket of 15-49yrs after integration of FP to HIV care. Despite rigorous counseling and motivation, this use was mostly for condoms while long term methods remained highly unutilized[25].

In Zambia, a randomized study was carried out to promote long term contraceptive use in HIV discordant couples. In this study the baseline contraceptive use was low; however, exposure to a video-based intervention that provided information on contraceptive methods and modeled desirable future planning behaviors dramatically increased the uptake of modern contraceptive methods[26]. The conclusions of this study strongly advocated integration of FP counseling in the VCT and Antenatal services. Moreover, family planning and HIV prevention programs should integrate counseling on dual method use, combining condoms for HIV/STI prevention with a long-acting contraceptive for added protection against unplanned pregnancy.

Integration of family planning services for female clients with other reproductive health services lowers the costs to clients and reduces missed opportunities for family planning services[27].

Figure 1 below highlights the various reproductive services in which FP services can be integrated

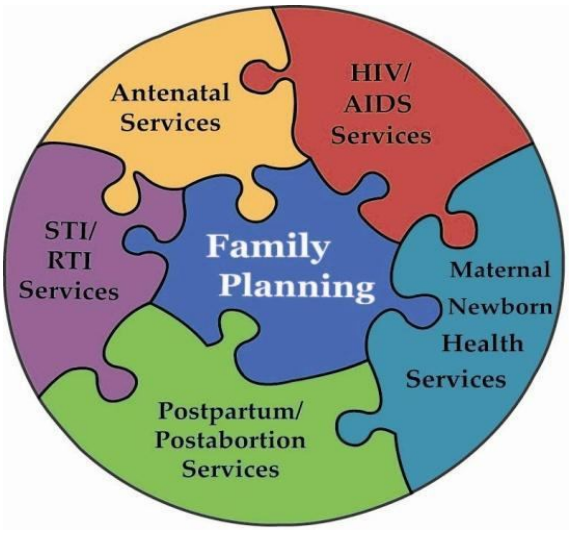

Figure 1: Integration of Family Planning services into reproductive services[27]

Prevention of unwanted pregnancy in HIV positive women reduced the rate of vertical transmission. More than 90% of pediatric HIV infections are vertically transmitted from the infected mothers. A cross sectional survey of 565 HIV infected women in Kigali Rwanda explored factors associated with unwanted pregnancies after knowing one's serostatus. 62.7% of these women became pregnant unintentionally due to nonuse of contraceptives[28]. This study suggests that HIV positive women under ART need special support to avoid unintended

pregnancies especially those who have two or more children. Moreover, interventions are also needed to improve women's understanding of the prognosis of pediatric AIDS, and condom-use negotiation skills.

The cultural aspects and society network also play a role in determining fertility desires in couples. A study carried out in Nyanza region of Kenya suggested that social learning is relevant in areas with high market activity as compared to regions with only modest market activity; however, social influence is the dominant means by which social networks affect women's contraceptive use[25]. In another study it is suggested that Counseling services should be expanded to address physical, social and emotional needs of continuing clients. Moreover, interventions to improve CPI should also address contextual and health system factors that prevent clients from using family planning consistently and effectively[8].

The postpartum period is an important time to initiate contraception because women are accessing the health care system and might have increased motivation to avoid another pregnancy[28]. Ovulation can occur as early as 25 days postpartum among non-breastfeeding women, underscoring the importance of initiating contraception in the very early postpartum period[29].

Oral contraceptive pills are a challenge to HIV infected patients due to pill burden, estrogen interactions with Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI), Nucleoside Reverse Transcriptase Inhibitors (NRTI) and protein inhibitors (PI). In addition, studies have strongly linked steroid hormones to progression and pathogenesis of invasive cancer of the cervix in immunosuppressed women[30]. The same study suggested that HIV infected patients

would benefit more with long term contraceptive methods: Depo, IUCD, implants and bilateral tubal ligation (BTL). The uptake of modern contraceptives in Kenya among married women is 39%[7] and the unmet need for FP is estimated at 24% in general population[31]. It approaches 60% among HIV infected women.

In a study done in Kenya, it was found that twice as many male clients [16%] compared to female clients [8%] desired a pregnancy in the subsequent six months[32.] In the very study also done in Namibia and Tanzania, it found that only a minority of participants had discussed family planning with a health care provider at their clinic [68% in Kenya, 40% in Namibia and 32% in Tanzania. The study recommended exploration of health care worker's attitudinal barriers and knowledge gaps.

The World Health Organization and United Nations regards FP as a cost effective HIV prevention strategy and an important prong to PMTCT of HIV/AIDS, hence their recommendation for the integration of HIV and FP services[33]. The problem facing majority of HIV care programs in resource poor settings however, is how to successfully provide reproductive health services including FP in a feasible, sustainable and cost effective manner.

In the KAP-gap study among Nepalese women to identify reasons for non-use of family planning among women with unmet need of FP, the commonly cited reasons were; causes headache, weakness and nausea, causes weight loss, causes heavy bleeding, insufficient money for nutritious foods, causes weakness and cannot work, currently in poor health, husband disapproves, affects breastfeeding and dries breast milk[34].

In another study done in Botswana, a Sub Saharan Africa country with the highest contraceptive prevalence rates, for non-users of contraceptives, the key factor for not using contraceptives was the women's attitude regarding FP services; this attitude may have been her own opposition to contraceptive usage influenced by others opposing FP services , or related to heath concerns. Costs of FP services and geographical distance did not influence decision for non-users. From the survey also, the unmet need for women between 15-29 years in age is for birth spacing. After the age of 30, the unmet need is for birth limiting. Of those women who were then pregnant, between 15-34 years of age, a greater proportion of pregnant women intended to use birth spacing after their current birth. After age 35, more women reported that they planned to limit their births[35].

Another study revealed that although geographical access to services remained a problem, the principle reasons for non-use were lack of knowledge, fear of side effects both life threatening and non-life threatening and social and familial/husband disapproval even when the women had never discussed FP with their husbands or families.[36]

Knowledge of the clients about contraception methods is related to use of the methods [37]. In Kenya, 95% of women knew at least one modern method of family planning and 6 in 10 women had heard about a long term and permanent family planning method. However, the contraceptive prevalence rate is still low despite the high levels of knowledge[7].

Family planning services should be geared towards meeting the needs for the FP clients. Effective delivery for FP services and especially LTCM depends on the attitude of the health care providers. Long waiting time, unofficial fees in the public sector and limited quantity of

information during provision of FP care could also hinder FP utilization [38]. Studies in Uganda show that lack of trained staff or transfer of trained and motivated staff resulted in low commitment of the staff that remained to provide the FP services [39]. Nevertheless, poor information provision ranging from poor display of education and communication materials, limited disclosure of methods and counseling about modern family planning methods and especially LTCMs, led to poor utilization of the services.[39]

2.0: PROBLEM STATEMENT AND JUSTIFICATION OF THE STUDY

WHO identifies use of FP to prevent unwanted pregnancies as one of the key steps in preventing delivery of HIV infected babies especially those conceived and born of mothers with very high viral load. In addition, in advanced HIV disease, pregnancy being an immunosuppressive state is known to cause exacerbation of HIV related symptoms with rapid deterioration of the patients. Globally, there exist a huge proportion of women with unmet contraceptive needs.

This problem is mostly seen in resource poor settings such as Sub-Saharan Africa. Over 200million persons are estimated to have HIV infections globally and out of these about 90% are in the third world. Equally similar deaths occur in the third world. The Sub-Saharan African (SSA) region remains the most afflicted by the disease[6].

In Kenya, about 2 million persons are estimated to have the disease with the most at risk persons being key drivers. These include men who have sex with other men (MSMs) and intravenous drug users who share needles and syringes. A big majority of these are in heterosexual relationships and transmit infections to their spouses and sexual partners[36]. Contraceptive availability, accessibility, acceptability and usage is key in preventing unwanted pregnancies by HIV infected women and consequently the vertical transmission to the unborn babies.

While studies have shown that long term contraceptives are the best for prevention of unwanted pregnancies and HIV transmission in terms of compliance and effectiveness, their

uptake is low in the Kenyan setting. The national contraceptive prevalence rate is at 39% while majority of those using one method or another are in urban areas[7]. A study carried out at a rural health facility established that only 30% of women attending a CCC were on FP method[17.]

To our knowledge, there has been no study to find out why the prevalence is low, and the factors that determine use of long term contraceptives especially in the postpartum mothers. Therefore, this study aims at determining those factors that deter use and non-use of LTCM by this group of women.

A few studies have been done to find out client barriers to uptake of contraceptives. There are however gaps on health provider's perspectives on enabling factors and barriers to contraceptive use. Furthermore, there are many other factors that may influence uptake of long term contraceptive methods. These include health care system, provider and policy factors. There is limited data on barriers to contraception among HIV positive post-partum mothers.

The HIV postpartum clinic provides an opportunity to service providers to bridge the gap between them and the potential clients for FP services. FP services are an important component to antenatal care (ANC) and postnatal care (PNC) services as a strategy to reduce the high maternal mortality rate (488/100,000 live births), maternal morbidity and infant mortality. The less the number of pregnancies, and the more the space between pregnancies and the less the risk to die because of pregnancy related complications.

The aim of the study therefore is to explore the factors that deter uptake of long term and permanent contraceptive services among HIV infected post-partum mothers. The study also looked at the client's enabling factors and barriers to contraceptive use. Identifying such factors could inform policy and suggest context specific strategies to improve contraceptive service provision amongst HIV infected post-partum mothers in order to reduce unintended pregnancies and decrease maternal morbidity and mortality.

3.0 RESEARCH QUESTION

What are the barriers to uptake of long term and permanent family planning use amongst HIV infected postpartum mothers attending HIV postpartum clinic at the sixth week visit?

4.0 NARRATIVE CONCEPTUAL FRAMEWORK

Several patient factors could influence their uptake of LTCMs. Lack of education of mothers may limit their awareness of the importance and hence low uptake of LTCMs. Also, the perceived need of many children as social security could also hinder the uptake of LTCMs. Nevertheless, fear of side effects could prevent them from using the FP methods. Lack of male involvement as well as lack of female empowerment in resources control could limit their capacity to utilize LTCMs hence low demand. Socio economic factors like poverty or low income of mothers and their spouses may affect demand for LTCMs which results in lack of transport fare and money for other costs.

Health service factors could also influence uptake of LTCMs. Out of stock of family planning supplies, lack of effective communication and counseling on LTCMs during the clinics and following delivery could hinder their uptake. This will lead to mothers to have limited awareness of family planning services hence low demand for such services. This could also be a consequence of excess workload and less motivation leading to provision of low quality services hence missed opportunities. Family planning services being provided in different settings from maternal and child health services could also hinder uptake of LTCMs.

Political environment does affect uptake of family planning methods. An effective policy making and implementation process is the foundation of scalable and sustainable health programs including those that integrate family planning.

4.1 Conceptual framework for missed opportunity for modern family planning services

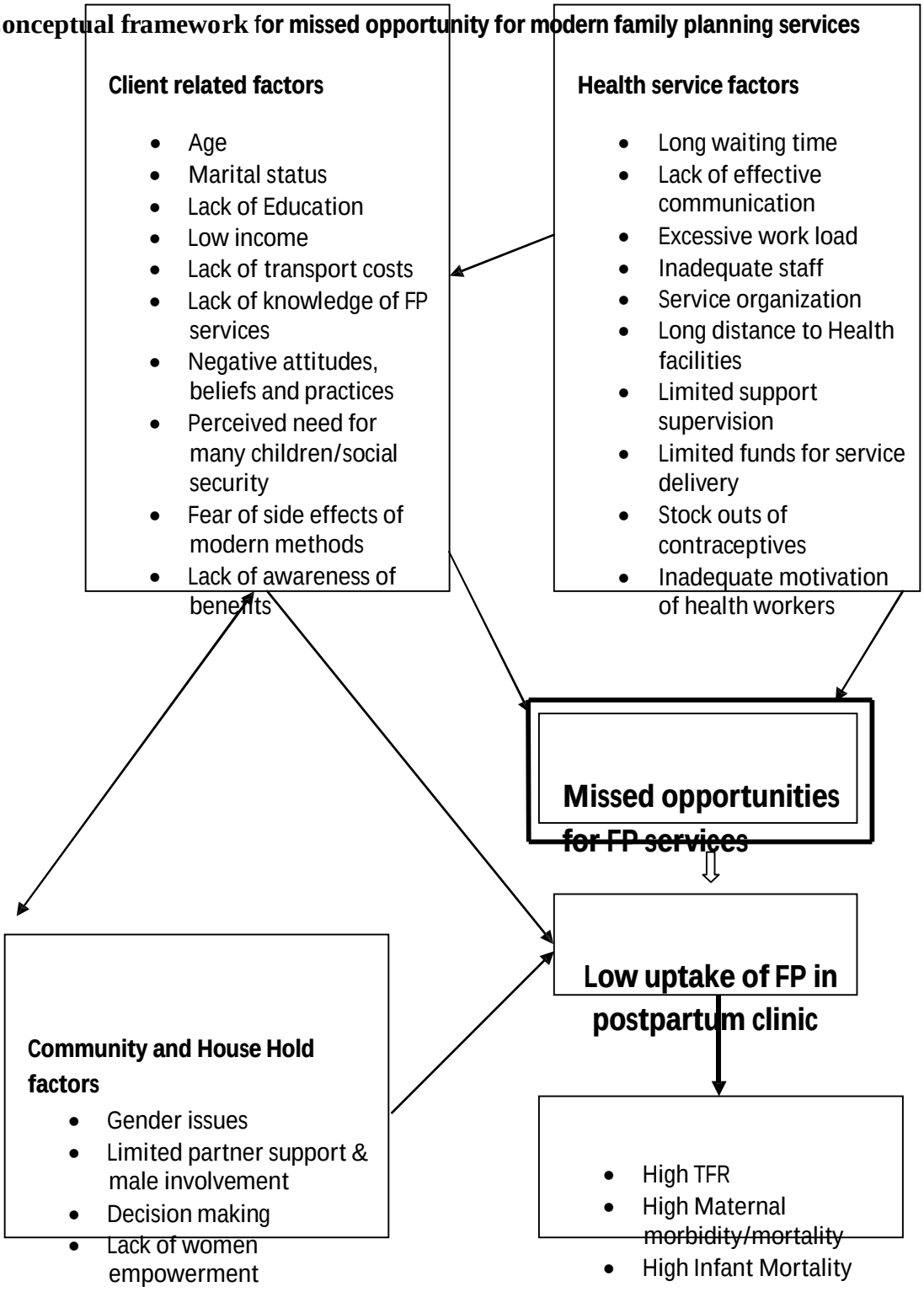

Figure 2: Conceptual framework for missed opportunities for Family Planning services

5.0 OBJECTIVES

5.1 Broad objective

To determine barriers to uptake of long term and permanent family planning methods amongst HIV infected postpartum mothers at KNH.

5.2 Specific objectives

1. To determine the prevalence of postpartum LTCM use amongst HIV infected postpartum mothers at KNH after the sixth week postpartum visit.

2. To correlate the socio demographic and clinical characteristics of HIV infected postpartum mothers and the use and preference of LTCMs.

3. To find out the barriers to uptake of LTCMs amongst HIV infected postpartum mothers at KNH.

6.0 METHODOLOGY

6.1 The study design

This was a hospital based descriptive cross sectional study in which 103 HIV infected postpartum women were interviewed at the end of the sixth week. The design was chosen to allow descriptive analysis of the socio-demographic and clinical characteristics of the HIV positive postpartum mothers and uptake of LTCMs.

6.2 The study area

The study area was Kenyatta National Hospital. KNH is a national referral and teaching hospital. It is situated in Nairobi, 4 kilometers west of the Central Business District. It is the main teaching hospital for the College of Health Sciences, University of Nairobi. The hospital caters for patients from Nairobi and its environs as well as referrals from other hospitals in the country and the East African region.

On average, KNH has 800 to 1000 deliveries per month of which approximately thirty percent are caesarian section deliveries. Out of these deliveries, approximately thirty to forty of them are from HIV positive mothers. All pregnant women who are HIV positive in KNH are started on ART irrespective of the disease stage and they continue taking the ARV drugs for life once initiated. Mothers with a CD4+ count of 250 or more are started on AZT+3TC+TDF if in first trimester and on AZT+3TC+NVP if CD4+ count is less than 250.

KNH has an HIV postpartum clinic which is located in Clinic 18 and is conducted every Friday morning. Any mother who delivered in the facility either via C/S or SVD was scheduled to come to the clinic at two and six weeks respectively after delivery for review by the clinicians. Clinic 18 also provides antenatal services, postnatal services and general gynecological outpatient clinic services. The majority of patients seen in the HIV postpartum clinic are KNH clinic attendants and a few are from referrals from lower level facilities within the environs of Nairobi. The clinic serves approximately 40-50 HIV patients on each clinic day. On average, the HIV postpartum clinic recruits five to seven new patients per week and about 20-30 new patients per month. HIV positive mothers are enrolled in the high risk clinic for follow up after delivery and are followed up in the clinic for one and a half years for those who are breastfeeding before eventually being discharged to the comprehensive care centre for follow up and management of HIV. The clinic also has a paediatric HIV clinic where the babies to the HIV positive mothers are reviewed and followed up by paediatricians. The HIV postpartum clinic is run by postgraduate students from university of Nairobi, clinic 18 nurses, and HIV counselors. Also in attendance are college students from Kenya Medical Training College.

6.3 The study population

One hundred and three (103) HIV infected postpartum mothers at their sixth week postpartum visit schedule were recruited in the study. The mothers included both those who delivered via C/S and SVD. The choice of this population was suitable because at the sixth week postpartum visit, the mothers should receive counseling on FP and make informed decisions on their preferred method for use.

6.3.1 Inclusion criteria

. Mothers who gave a written informed consent to participate in the study.

. Mothers who were HIV infected postpartum at their sixth week of postpartum visit irrespective of their mode of delivery.

6.3.2 Exclusion criteria

. Mothers who were very sick.

6.4 Sampling Procedure

Convenience sampling was used to sample the individual participants whereby all HIV positive postpartum mothers at Kenyatta National Hospital were eligible for selection. Women who fulfilled the inclusion criteria were recruited into the study by the Principal Investigator and two Assistants. The entry point was HIV Postpartum Clinic (Clinic 18) reception office where all mothers attending HIV postpartum clinic on every Friday report on arrival for files to be retrieved for consultations of the day. All the files were identified and the files for those who were coming for the sixth week postpartum visit were noted down. The mothers whose files had been noted down were selected consecutively. Five patients were sampled conveniently every week during the period of the study. The participants were approached and requested to participate in the study after being reviewed by the clinician. An average of five patients per

week were recruited for the study and this was done on each clinic day until the sample size was obtained. Exit face to face interviews with mothers who had come for the postpartum visit at sixth week were conducted. Data collection period was spread out for a period of five months to enable us capture any variations.

6.5 Sample size calculation.

Sample size was determined using the single population formula for proportions

$$n = \frac{Z^2 [P(1-P)]^*}{d^2}$$

Whereby:-

n is the required sample size

z= statistical score is the critical value associated with significance level of 95% confidence interval, is 1.96

p is the national prevalence rate of HIV among the women in reproductive age (=6.3% or 0.063*)

q is the proportion not infected with HIV ie 1-0.063 =0.937

d, the margin of error accepted for this study will be 95% confidence interval and a margin of error of +/- 0.05.

Substituting the variables above: (n=sample; z=1.96; p=0.063; q=0.935; d=0.05)

$$n = \frac{(1.96)^2\ 0.063 \times 0.935}{0.05 \times 0.05} = 93.389296$$ Rounded to 94 respondents.

** Source: Kenya demographic Health Survey 2008/09. Adult HIV prevalence for age 15-64yrs.*

In order to take care of study drop outs and attrition, a 10% increase in this statistical sample size will be added. Thus the required sample will be 103 participants. The sample size was increased also to improve precision for uptake of LTCMs.

6.6 Data collection instrument

A structured questionnaire was used (Appendix II). The questionnaire was administered by the interviewer. The questionnaire had both open ended and closed ended questions.

6.7 Data Collection

Data was collected by the principle investigator and two assistants. A pretested structured questionnaire was employed for exit interviews of 103 HIV positive postpartum mothers. Convenience sampling was done to recruit patients until the required sample size was obtained.

None of the women approached declined to participate in the study. The principal investigator or the research assistant introduced themselves to the mothers and informed each patient who had been selected for the study by convenience sampling about the research and asked them to participate on a voluntary basis. Upon agreement by the mother, the participant gave a written informed consent and was assigned a study number. The mother was then interviewed in a private room in the clinic using an interviewer administered questionnaire. The mothers were interviewed on their exposure to FP information, counseling during pregnancy, child birth, postpartum period and their socio-demographic and clinical characteristics

6.8 Data Management, analysis and quality assurance

6.8.1 Quality control of data

The research assistants were trained on interviewing, information retrieval and filling of the questionnaires. Data collection tools were pretested prior to data collection. The principal investigator supervised the data collection exercise. Data editing to ensure consistence and completeness was done.

6.8.2 Data handling and analysis

The completed forms were handed over to the biostatistician for entry and analysis after data collection. Qualitative data was analyzed using Statistical Package of Social Sciences (SPSS) version 17.0. Odd's ratios, 95% confidence interval and p value set at 0.05 were used to determine the statistical significance of the associations.

6.9 ETHICAL CONSIDERATIONS

Approval for the research was sought from the KNH Ethics and Research Committee before the study was carried out. Informed consent was sought from each correspondent before participation in the study. Questionnaires were coded and patients' names were not used. No incentives were given to the study participants. Privacy and confidentiality were safeguarded throughout the course of the study. Mothers who desired LTCM were referred to the FP clinic for the service. The participants participated in the study on a voluntary basis. The principal investigator and the research assistants introduced themselves to each participant and informed her of the nature and purpose of the study.

6.10 STUDY LIMITATIONS

The study being in a health facility could have been subjected to selection bias. However, data collection was spread out to five months in order to capture any variations.

Most of the mothers are unlikely to be on a long term FP method by the sixth week postpartum week. However, FP services are an important component to post natal care services as a strategy to reduce maternal mortality and morbidity and infant mortality. Hence, if the mothers are not counseled on long term FP methods during the sixth week visit, they may have limited awareness of FP services which could lead to low demand for such services.

7.0 RESULTS

One hundred and three (103) mothers were interviewed at the HIV postpartum clinic and there was a 100% response rate. The results revealed that the mean age of the respondents was 29.5 years (SD=5 years) and a median parity of 2 (IQR 1-3). 97.1% of the mothers were Christians with a majority (73.8%) of the respondents in married relationships. Literacy levels were high with all the women having at least a primary level of education. Most of the respondents had a parity of two and the median parity was 2.

Table 1: Socio-demographic characteristics of HIV infected postpartum mothers at KNH.

Variable	**Frequency (%)**
Age	
Mean (SD)	29.5 (5.0)
Min-Max	19-42
Parity	
Mean (SD)	2.2 (1.0)
Median (IQR)	2 (1-3)
Min-Max	1-4
Parity	
1	31 (30.1)
2	37 (36.0)
3	23 (22.3)
4	12 (11.7)
Religion	
Christianity	100 (97.1)
Muslim	3 (2.9)
Marital status	
Single	20 (19.4)
Married	76 (73.8)
Widowed	3 (2.9)
Separated	4 (3.9)
Level of education	
Primary	26 (25.3)

Secondary	45 (43.7)
College	31 (30.1)
Masters	1 (1.0)

Long term family planning methods uptake

As shown in figure 1, 11.7 % of the respondents were using at the time modern family planning methods at the time of the study.

Only 0.97 % of the respondents were on a long term family planning method. About 40 % of the respondents had preference for LTCM. The main source of family planning information was a public health facility (68 %).

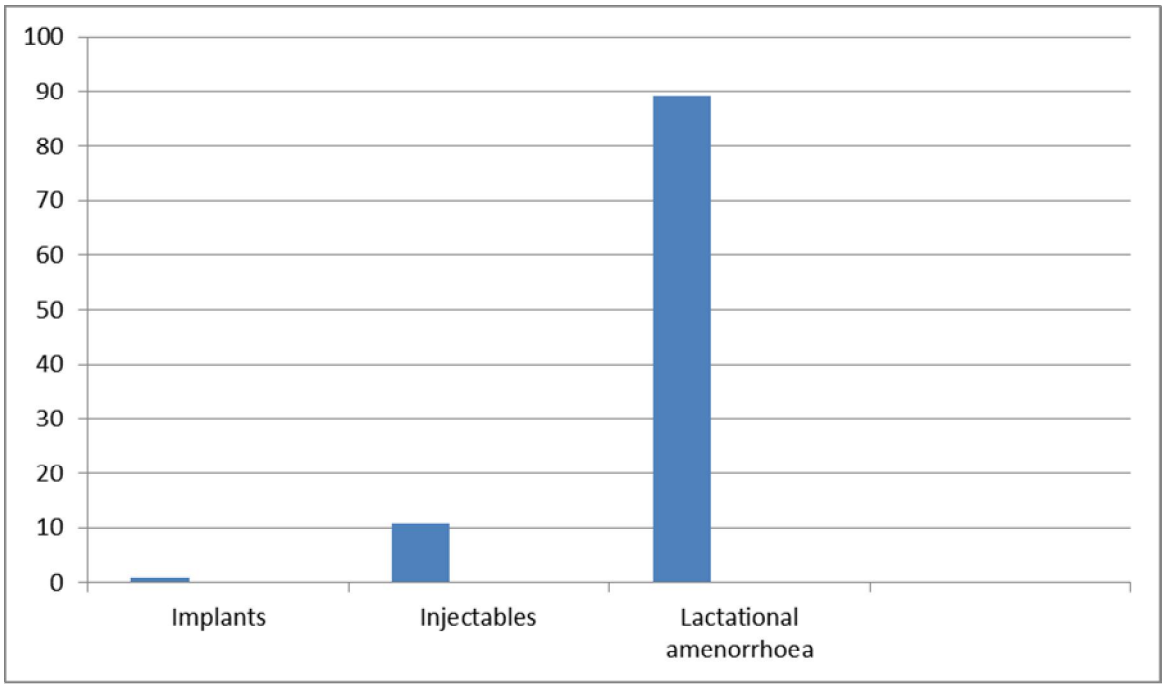

Figure 3: Distribution of FP methods used by the respondents as at 6th week postpartum visit

Source of FP methods information

5.8% of the respondents had never heard of a contraceptive method while 18.4 % had never

heard of a LTCM. Majority of the respondents (68%) reported source of family planning information from public health facility. These findings are depicted in figure 4 below.

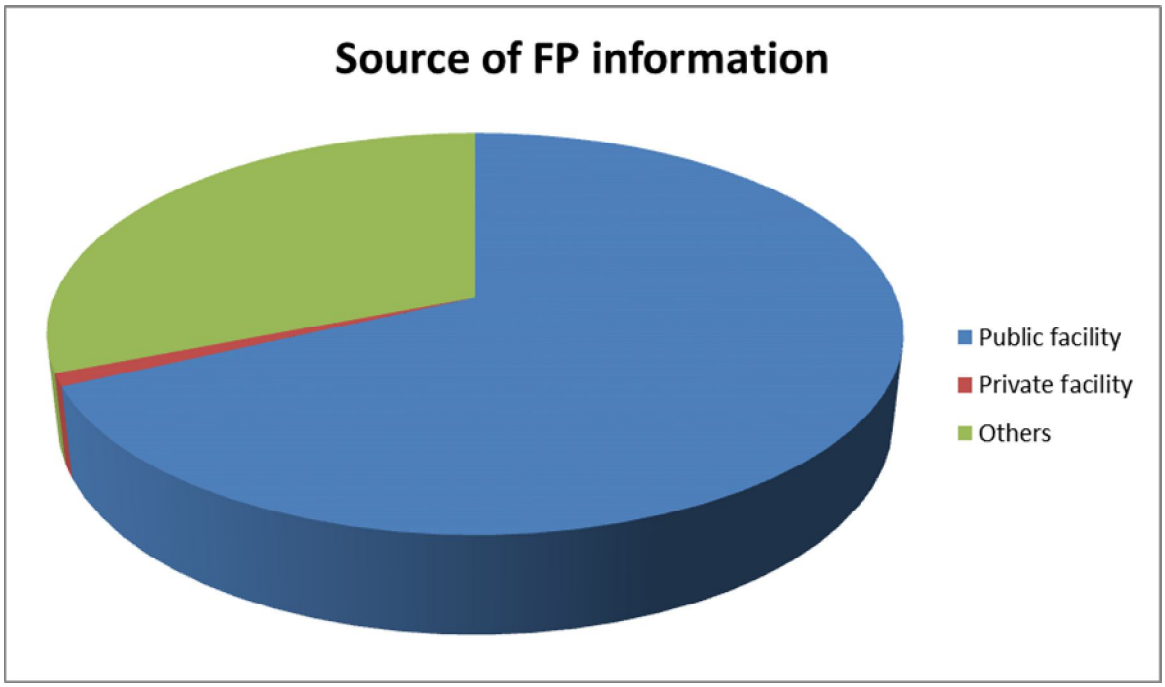

Figure 4: Source of FP methods information

Clinical information

Slightly more than a half (51.4%) of the women first knew their status during ANC while 38.8% knew their status prior to their pregnancy and 9.7% were tested after delivery. Majority (95.1%) of the women were on ARVs. The number of pregnancies since knowing their HIV status was one (1) for 75% of the women with the rest having been pregnant more than once after HIV diagnosis. Also, 22.5% of the women who knew their status before pregnancy had more than 1 child since diagnosis of HIV.

Though a majority (56.3%) of the women knew the HIV status of their spouses, a substantial proportion of 43.7% did not know.

The mode of delivery was mainly vaginal delivery (66%). The information is summarized in table 2 below.

Table 2: Clinical characteristics of the respondents

Variable	Frequency (%)
When HIV diagnosis was known	
Before pregnancy	40 (38.8)
During ANC	53 (51.4)
After delivery	10 (9.7)
Pregnancies since she knew her status (n=40)	
1	30 (75.0)
2	5 (12.5)
3	2 (5.0)
4	3 (7.5)
Number of children (n=40)	
1	31 (77.5)
>=2	9 (22.5)
HIV status of spouse known	
Yes	58 (56.3)
No	45 (43.7)
Currently on ARVs	
Yes	98 (95.1)
No	5 (4.9)
Mode of delivery	
Vaginal delivery	68 (66.0)
Caesarian delivery	35 (34.0)

Planned pregnancy

Though a majority (54.4%) said they had planned for their previous pregnancy, 45.6% pregnancies were unplanned. Out of those whose pregnancies were unplanned, 38.7% were willing to abort if given a chance. This is illustrated in table 3 below.

Table 3: Previous pregnancy planning

Variable	Frequency (%)
Last pregnancy planned	
Yes	56 (54.4)
No	47 (45.6)
Would have aborted pregnancy given a chance (n=47)	
Yes	18 (38.7)
No	29 (61.3)

Utilization of long term contraceptive methods

Majority (81.6%) of the women were aware of a long term and permanent FP method however, only 0.97% were using a long term method of family planning method. Only one out of the one hundred and three respondents was on Jadelle. Besides, 41.7% preferred using long term FP methods while 46.6% did not want to use them.

More than a half (54.4%) of the women had support from the partners on the use of FP methods. Also, 59.2% said that accessibility of FP services by HIV infected people was easy though a substantial 40.8% felt it was not easy. The results are summarized in table 4 below.

Table 4: Use and preference of long term FP methods

Variable	Frequency (%)
Knowledge of LTCM	
Yes	84 (81.6)
No	19 (18.4)
Currently on long term FP method	
Yes	1(0.97%)
No	102 (99.03)
Long term method	
Jadelle	1 (0.97%)
Would like / prefer to use the long-term FP method	
Yes	43 (41.7)
No	48 (46.6)
Not applicable	12 (11.7)
Partner support use of FP methods	
Yes	56 (54.4)
No	47 (45.6)
Access of FP services as HIV infected person	
Easy	61 (59.2)
Not easy	42 (40.8)

Background characteristics of the respondents versus preference for LTCMs

The study revealed that older women (mean 30.6 years) had a preference to use LTCM compared to the younger (mean 28.7 years), p=0.051. Also, the women who would like to use LTCM were more likely to report knowing the HIV status of their spouse, OR 3.8 (95% CI 1.6-8.9), p=0.002. All the other socio-demographic and clinical characteristics of the mothers such as parity, education, marital status, FP counseling, use of ARVs and CD4 levels did not have statistically significant association with LTCMs preference as depicted in table 5 below.

Table 5: Social and clinical characteristics of the respondents versus LTCM preference

Variable	Prefer to use LTCM		OR (95% CI)	P value
	Yes (n=43)	No (n=60)		
Age	30.6 (4.7)	28.7 (5.1)	-	0.051
Parity	2 (2-3)	2 (1-3)	-	0.102
Marital status				
Single	5 (11.6%)	15 (25.0%)	1.0	
Married	35 (81.4%)	41 (68.3%)	2.6 (0.8-7.8)	0.089
Widowed	2 (4.7%)	1 (1.7%)	6.0 (0.4-81.2)	0.144
Separated	1 (2.3%)	3 (5.0%)	1.0 (0.1-11.9)	1.000
Level of education				
Primary	12 (27.9%)	14 (22.0%)	1.0	
Secondary	18 (41.9%)	27 (45.8%)	0.7 (0.3-1.9)	0.517
College	13 (30.2%)	19 (32.2%)	0.7 (0.3-2.1)	0.578
HIV status of spouse known				
Yes	32 (74.4%)	26 (43.3%)	3.8 (1.6-8.9)	0.002
No	11 (25.6%)	34 (56.7%)	1.0	
Cost of contraceptive method				
Free	18 (52.9%)	15 (50.0%)	1.0	
Cheap	15 (44.1%)	14 (46.7%)	0.9 (0.3-2.4)	0.824
Expensive	1 (2.9%)	1 (3.3%)	0.8 (0.0-14.5)	0.900
Currently on ARVs				
Yes	40 (93.0%)	58 (96.7%)	0.5 (0.1-2.9)	0.647
No	3 (7.0%)	2 (3.3%)	1.0	
FP discussed during pregnancy	27 (73.0%)	40 (76.9%)	0.8 (0.3-2.1)	0.670
Yes	10 (27%.0)	12 (23.1%)	1.0	
No				
CD4 count	422 (320-624)	450 (350-640)	-	0.640

FP counselor and preference of LTCM

As shown in table 6 below, the rate of LTCM was 44.4% among the women counseled by nurses and 50% among those counseled by doctors while a high rate (80%) was reported among those counseled by midwives. However, the association between the counselor and the choice to take up LTCM was not statistically significant (p=0.315). The counseling by the

nurses was done when patients are in a group before they are reviewed by the clinician while that of mid wives and doctor were one on one. All the respondents reported that the emphasis of the counseling was on use of condoms.

Table 6: FP counselor and preference for LTCM

Variable	Prefer to use LTCM		P value
	Yes (n=43)	No (n=60)	
FP counselor			
Nurses	23 (44.2%)	29 (55.8%)	0.315
Midwives	4 (80.0%)	1 (20.0%)	
Doctor	4 (50.0%)	4 (50.0%)	

Household factors

Table 7 below shows that in this study, disclosure of HIV status to the spouse (husband) increased the likelihood of the mother to prefer a long term and permanent FP method (p value = 0.002). However, the number of living children did not affect the preference of LTCM. Partner support for the use of LTCMs was statistically associated with preference for LTCM (p value = 0.001). The number of miscarriages the mother had did not significantly affect preference of LTCM use (p value = 0.268). Though most of the respondents had knowledge of at least one LTCM, this did not statistically affect preference for LTCM use.

Table 7: Household factors versus LTCM preference

Variable	Prefer to use LTCM		OR (95% CI)	P value
	Yes (n=43)	No (n=60)		
Knowledge of LTCM				
Yes	38 (88.4%)	46 (76.7%)	2.3 (0.8-7.0)	0.131
No	5 (11.6%)	14 (23.3%)	1.0	
Partner support use of FP methods				
Yes	33 (76.7%)	23 (38.3%)	5.1 (1.9-13.8)	0.001
No	7 (16.3%)	25 (41.7%)	1.0	
Not sure	3 (7.0%)	12 (20.0%)	0.9 (0.2-4.1)	0.884
Any miscarriages				
Yes	11 (25.6%)	10 (16.7%)	1.7 (0.7-4.5)	0.268
No	32 (74.4%)	50 (83.3%)	1.0	
Children status				
All alive	35 (81.4%)	49 (81.7%)	1.0 (0.4-2.7)	0.972
Not all alive	8 (18.6%)	11 (18.3%)	1.0	

Barriers/ missed opportunities to uptake of LTCMs

During the interviews, several reasons were given by the respondents who had preference for long term and permanent contraception method but were then not on it. These reasons were mainly the mother not having seen her menstrual periods yet, and inconvenience at the FP clinic because they would be required to start the process of opening another card (see figure 5 below).

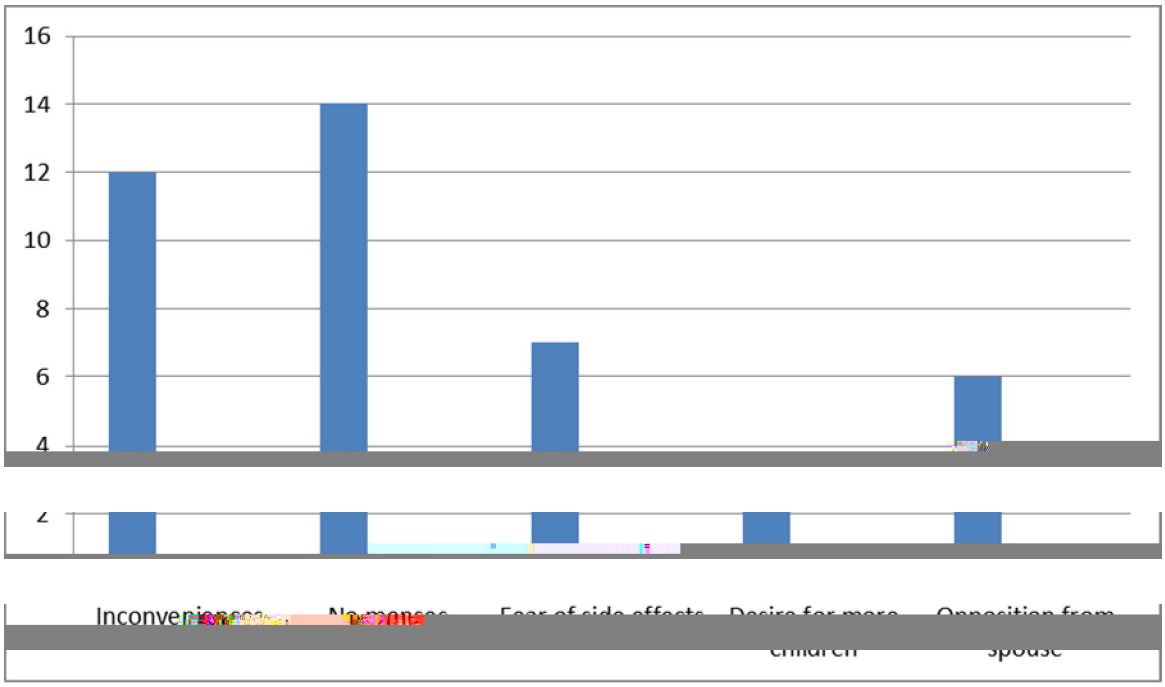

Figure 5: Reasons for non-use of LTCMs by respondents who had preference for LTCMs (n=42).

As shown in figure 6 below, only 7.8% of the respondents reported to have discussed family planning during the sixth week postpartum visit by the clinician. This was a missed opportunity to the mothers as this would reduce their awareness on LTCM and the counseling by the clinician, may allay any fears that the clients may be having regarding LTCMs.

60% of the respondents preferred short term methods and specifically condoms. Majority reported that there was emphasis on FP use even during the morning teachings with the counselors and they did not see the need to be on a LTCM when already they were using condoms.

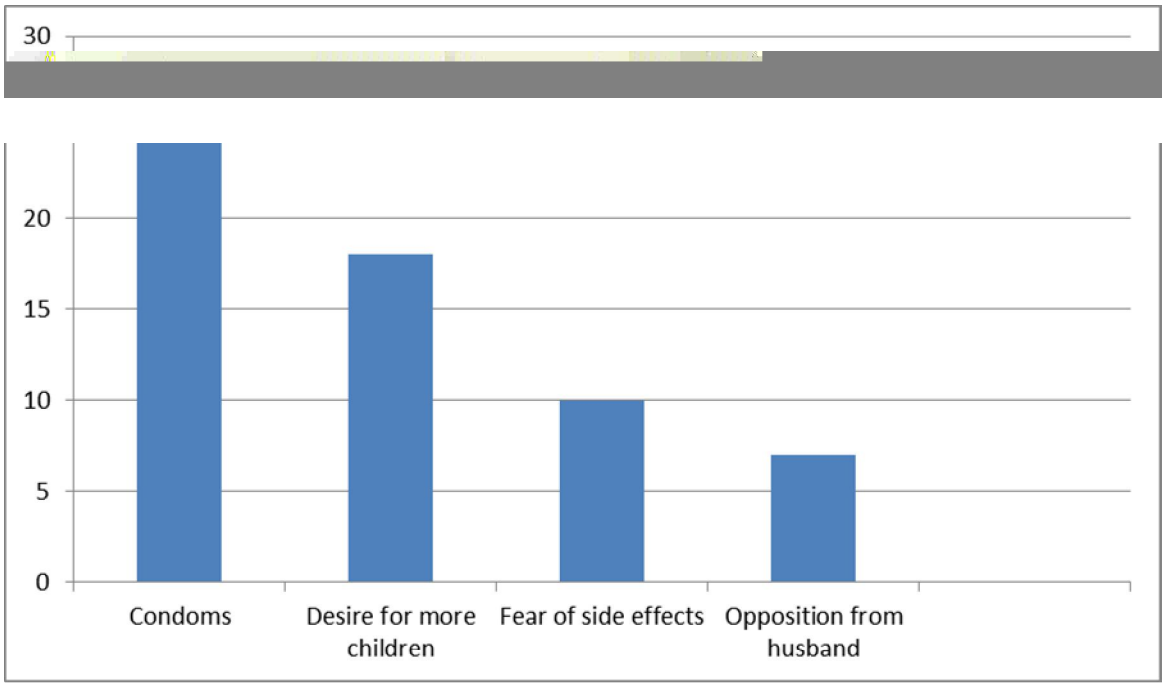

Figure 6: Reasons for non-use of LTCMs by respondents who had no preference for LTCMs.

Women were asked of their opinion on the reasons that influence lack of use of long term FP methods among HIV positive women. Majority (27.2%) said it was because of their fertility desires and 12.6% attributed to the emphasis that is put on condoms hence serving the same purpose. Others mentioned that fear of side effects (9.7%) as an impediment while 8.7% said their husbands oppose it and 5.8% blamed ignorance or lack of knowledge on long term contraceptive methods. However, a high proportion (35.9%) had no idea why HIV positive mothers were not accessing long term contraceptive methods. These findings are shown in figure 7 below.

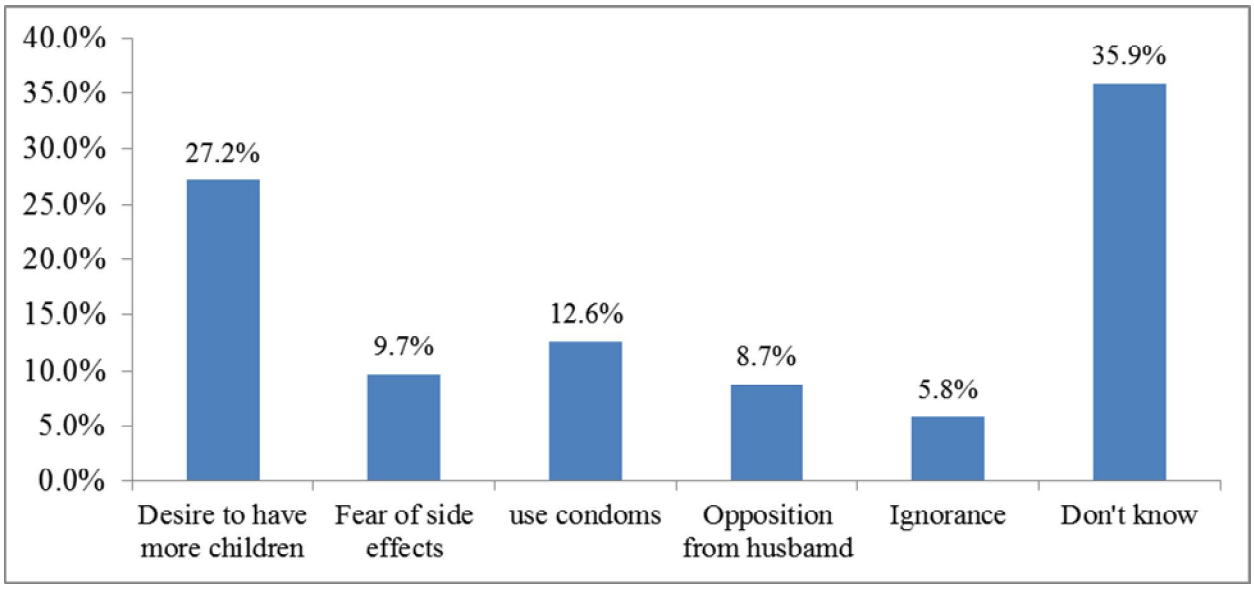

Figure 7: Reasons for non-use of LTCMs amongst HIV positive women irrespective of their LTCM preference.

8.0 DISCUSSION

Family planning is important in reducing the total fertility rate and subsequent reduction in maternal and infant morbidity and mortality. Post natal care represents a window of opportunity for education, information and communication to newly delivered mothers so that they may make appropriate choices particularly decisions on use of family planning

This study assessed the barriers to uptake of long term and permanent family planning methods among HIV infected postpartum mothers attending high risk clinic at KNH. A total of 103 HIV infected postpartum mothers were interviewed.

The key findings of the research were as follows:

1. The uptake of LTCM after sixth week postpartum visit for the HIV infected postpartum women was very low at 0.97%.

2. The factors that were associated with preference for long term and permanent contraceptive methods use were older age and the mother's knowledge of the HIV status of the spouse.

3. The barriers to uptake of long term and permanent family planning methods amongst HIV infected postpartum women at KNH included lack of family planning services in the same set up as the postpartum clinic, low rate of family planning counseling to the HIV infected postpartum mothers at the postpartum clinic and patient preference for short term FP methods specifically condoms.

4. Only eight mothers had one on one counseling on Family planning use during the sixth week postpartum visit.

The findings showed that the prevalence of LTCM at sixth week postpartum visit was 0.97%. This is below the national prevalence of use of LTCMs of 8% [7]. This may be because we interviewed mothers at six weeks postpartum and most postpartum mothers normally haven't started FP by this time. This may also be due to low demand from clients as some of the clients had preference for short term methods. Postnatal care represents a window of opportunity for information; education and communication to newly delivered mothers so that they will make appropriate choices especially towards care of infants and themselves and particularly take decisions on use of family planning methods. However the opportunities may be lost.

This study revealed that the rate of family counseling done by clinicians in the HIV postpartum clinic was low at 7.7%. This is similar to a study done in Kenya, Namibia and Tanzania in 2011 which found that that only a minority of participants had discussed family planning with a health care provider at the clinic (68% in Kenya, 40% in Namibia and 32% in Tanzania) [32]. In this study, passing of family planning information during antenatal clinic does not improve chances of a mother using a long term and permanent family planning method (OR = 0.8 (0.3-2.1), p value = 0.670). This may be because during pregnancy, family planning may not be a priority and the pregnant mother may be more concerned with the health of the fetus they are carrying. They may also be more interested of how to

carry the pregnancy to term without any complications and issues of family planning uptake may be important only after delivery of the baby.

Again, important to note is that in the study was most mothers (81.6%) had been exposed to information on long term and permanent family planning methods, yet this did not increase the preference for LTCMs (p value=0.131). This may be due to inadequate information to address the family planning needs of the clients. For example, the main reason why the HIV infected postpartum mothers who had a preference for LTCM were not on the long term contraceptive was because the mothers had not resumed menses. This highlights the need for mothers to be counseled so that they can understand that one can become pregnant even before they resume menses, hence it is very important to start a long term family planning method as early as possible. This may also be because the mothers have a lot of unexplained questions especially to do with perceived side effects of LTCMs. Fear of side effects was the third commonest reason on what the mothers thought were the reasons why many people were not using LTCM at 9.7%. The high knowledge may be due to exposure to many sources of information like internet services and electronic media in urban setting.

Despite availability of long term family planning methods services in KNH, the preference for them was at 40%. Among client related factors, the number of living children was not found to influence preference for LTCM uptake in this study. This is contrary to what is reported by KDHS (2008)[7]. This could be explained by the study being done in an urban setting. This could be explained by the positive attitudes of men towards FP services. This

study revealed that 55% of men support use of LTCMs by their women. This could be explained by the positive attitudes of men towards FP services. Male involvement in reproductive health services is crucial to improve LTCMs uptake.

One of the factors associated with preference for LTCM was older age (p value =0.05). This is similar to the national findings [7]. This may be due to the feeling by the mothers of stability in their family and a feeling of having had the right family size. Another factor associated with preference for long term family planning method was knowledge of the HIV status of the couple (p value = 0.002). This may be due to lack of fear to discuss reproductive health services as each one knows the serostatus of each other and have decided to live together in harmony.

Nevertheless, another factor that led to missed opportunity for LTCM was failure to provide family planning services in the same setting as the postpartum clinic services. A significant proportion of the mothers at 30% of the mothers who had preference for LTCM and were not on the method sited inconvenience and long queues in the family planning clinic as the reason they were not on a LTCM. Integration of family planning services for female clients with frequently used Maternal and Child Health (MCH) and reproductive services would lower costs to clients and reduce missed opportunities for service delivery [27].

Preference for short term methods and specifically condoms was noted to be a barrier to uptake of LTCM. Approximately 60% of the mothers preferred a short term contraceptive method. The preference of condoms could be due to the fact that for a long time, condoms

have been emphasized for use for the prevention of HIV transmission. Also, mothers having unexplained questions on the perceived side effects of the LTCMs could explain the high preference of barrier methods. These findings of method related reasons are similar to national reasons for not using contraception [7]. The mothers also reported that majority of people do not prefer LTCMs due to desire to have more children. This was the main reason the mothers thought most women were not on LTCM. Similar findings also reported in KDHS 2008 [7].

9.0 CONCLUSIONS

The findings highlight important missed opportunities to provide long term and permanent family methods amongst HIV infected postpartum mothers despite significant preference of LTCMs. The postpartum uptake of LTCMs amongst HIV infected postpartum women at six weeks was very low. A small proportion of patients had discussed with the clinician on family planning at the HIV postpartum clinic. Also, family planning services were being offered in a different set up from the HIV postpartum clinic. Nevertheless, most of the mothers had preference for barrier methods and they reported that the emphasis during their previous HIV clinics was on use of condoms.

Older age and knowledge of the HIV status of the couple was associated with preference for long term and permanent family planning methods.

Face to face counseling of HIV infected postpartum mothers on LTCMs would ensure the mothers receive accurate and complete information on LTCMs hence reduce the myths and

perceptions concerning the LTCMs use during postpartum period and beyond. This could later lead to improved uptake of LTCMs.

9.1RECOMMENDATIONS

1. Integration of family planning services in sexual and reproductive health, most especially in HIV postpartum clinic and immediately after delivery before mothers are discharged is critical to improve uptake of LTCMs. KNH should provide a policy framework on provision of postpartum FP services to guide health workers in quality service provision.

2. KNH should look into possibility of providing a check list to be used when offering services to HIV infected postpartum mothers so that clinicians do not forget to discuss with patients on important services like family planning.

3. One on one counseling on LTCMs amongst HIV infected postpartum mothers should be enhanced.

4. Partner disclosure of HIV status strategies should be put in place to increase preference and hence uptake of LTCMs.

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APPENDIX 1: CONSENT FORM

Introduction:

My name is Dr Boniface Wendo. I am a postgraduate student at the University of Nairobi, department of Obstetrics and gynecology.

I am carrying out a research to determine the factors that determine the use of long term contraceptive methods among the HIV positive women, attending the post natal clinic at the KNH.

You are hereby invited to participate in the study.

Note that it is your right to decide if to participate in the study or not to participate. Your refusal to participate in the study will not interfere with the services you are getting currently at the KNH.

Objectives of the study: The broad objective of the study is to find out barriers to uptake of long term and permanent contraceptive methods among HIV infected postnatal mothers at Kenyatta National Hospital.

What the study entails: If you accept to take part, you will be asked some questions in regard to the topic. There will be no procedures or tests done on you.

Benefits of the research: Some of the benefits of the study include counseling on available contraceptive methods and appropriate referrals to those wishing to commence a family planning method of their choice.

Potential risks: there are no risks anticipated in this study. However, the interview will take a few of your minutes.

You are assured that the information you will provide will not be linked to you directly and your personal details will not be revealed to any person.

Voluntarism: It is your right to decide if you want to participate in the study or not. Your decision will not interfere with the services you are provided for at Kenyatta National Hospital.

Follow up schedule: No follow up is required after participating in the study.

Further information: for more information, you can contact the researcher through Telephone 0721461325 or the Kenyatta National Hospital/UON ethics Committee on Telephone 0202726300 Ext 44355.

Researcher's statement: I confirm that I have exhaustively explained the study to the participant and sought voluntary informed consent from her

Signed……Date……/……/20……

Respondent's Statement: I conform that this study has been explained to me and all the questions satisfactorily answered to me by the interviewer.

Sign/Thumb Print…….Date……/……/20…….

APPENDIX 2 : QUESTIONNAIRE

SECTION 1 BIODATA

SERIAL NUMBER:…….....

1. AGE (Number of completed years).....
2. PARITY (number of deliveries to children beyond 28wks).....

   1 2 3 4 5 6 7 8 9 10

3. Have you had any miscarriages

   1YES.... 2 NO

4. NUMBER OF LIVING CHILDREN.

   Please indicate the Number.....

5. Where applicable, what was the cause of deaths for the dead children ?

   ……
   ……

6. RELIGION

   1 Christianity 2Muslim 3Others…..specify.

7. MATIRAL STATUS...

   1 Single 2. Married 3. Divorce 4. Widowed 5. Separated

8. LEVEL OF EDUCATION....

   1 None 2 Primary 3 secondary 4 College 5 Masters 6 PHD

9. ETHNICITY

   State where applicable.....

10. RESIDENCE.....

    State where you live.....

11. OCCUPATION.....

12. PARTNERS' OCCUPATION

State your partner's occupation.....

13. IS THE HIV STATUS OF YOUR SPOUSE KNOWN?

1 Yes 2 No

14. DURATION OF CONFIRMED DISEASE (state duration in years)

State duration in years……

15. WHEN WAS YOUR DIAGNOSIS (HIV STATUS) KNOWN?

1 Before pregnancy 2 During ANC 3 In labor 4 after delivery 5 Others (specify)……..

16. WERE YOU EVER COUNSELLED ON FP AT YOUR POINT OF DIAGNOSIS?

1. Yes 2 No.

17. IF YOU WERE ON FP BEFORE YOU CONCEIVED, WHERE WERE YOU GETTING YOUR SUPPLIES FROM?

1 CCC 2 OTC 3 Local Hospital 4 others (specify)……..

18. WHAT WAS THE COST OF THE CONTRACEPTIVE METHOD?

1. Free 2. Cheap 3. Expensive.

19. ARE THERE TIMES WHEN THERE IS/WAS NO STOCK OF FP AT THE SAID SITE?

1 Yes 2 No

20. CD4 COUNT(STATE IN FIGURES IF DONE).....NOT DONE.....

21. SINCE YOU KNEW YOUR STATUS HOW MANY PREGANCIES HAVE YOU HAD?

State the number of pregnancies……..

State the number of children you have had……

22. ARE YOU CURRENTLY ON ARVS?

1 Yes 2 No

23. WHAT WAS THE MODE OF YOUR LAST DELIVERY?

1 Vaginal Delivery 2 Caesarian Delivery

SECTION 2: USE OR NONUSE OF FP

1. DO YOU KNOW ANY CONTRACEPTIVE METHOD?

   1. Yes 2.No.

2. IF YES IN 1. ABOVE, LIST THE CONTRACEPTIVE METHODS YOU KNOW

3. WHAT WAS THE SOURCE OF THE CONTRACEPTION INFORMATION?

   1 Public facility 2 Private facility 3.Others (Specify)

4. HAVE YOU EVER USED ANY FP METHOD BEFORE YOUR LAST DELIVERY?

   1 Yes 2 No

5. IF YES, WERE YOU INFORMED OF THE POSSIBLE SIDE EFFECTS AND WAHAT TO DO IF YOU EXPERIENCE THEM?

   1 Yes 2 No

6. HAVE YOU EVER RECEIVED PRIOR COUNSELING FOR FP?

   1 Yes 2 No

7. IF YES, BY WHOM?

   1 Nurses 2 Midwives 3 Doctor 4 Other patients 5 Others (specify)…….

8. EVER HEARD OF OTHER FP METHODS APART FROM THE ONE YOU ARE ON?

   1 Yes 2 No 3 Not applicable

9. IF NOT ON ANY METHOD, WHY NOT?

   1. Fertility related reasons
   2. Opposition to use (specify)

3. Lack of knowledge
4. Method related reasons
5. Don’t know.
6. Other (Specify)

10. HAVE YOU EVER HEARD OF PERMANEMT METHODS TO STOP CHILDBEARING?

    1 Yes 2 No

11. WOULD YOU LIKE TO HAVE LONG TERM METHOD OF FAMILY PLANING? 1. 1 Yes 2 No

12. IF YES, WHY WOULD YOU LIKE THE LONG TERM METHOD?

    State the reason provided by the respondent……

13. IF NO, WHY WOULD YOU NOT PREFER LONG TERM METHOD?

    1. Fertility related reasons

    2. Opposition to use (specify)

    3. Method related reasons

    4 .Don‘t know.

    5. Other (Specify)

14. DOES YOUR PARTNER SUPPORT THE USE OF FAMILY PLANNING METHODS TO PREVENT PREGNANCY?

    1 Yes 2 No 3 Not Sure

SECTION 3: OTHERS

1. WAS FP DISCUSSED AFTER YOUR VCT?

   1 Yes 2 No 3 Cannot Remember

2. WAS FP DISCUSSED DURING PREGNANCY?

1 Yes 2 No 3 Not Sure

3. WAS YOUR LAST PREGNANCY PLANNED FOR?

   1 Yes 2 No 3 Not Sure

4. IF NO, WOULD YOU HAVE ABORTED THE PREGANCY GIVEN A CHANCE?

   1 Yes 2 No

5. HOW EASY WAS/IS IT TO ACCESS FP SERVICES AS A HIV INFECTED PERSON?

   1 Easy 2 Not Easy.....

WHY IN YOUR OPINION DO YOU THINK HIV POSITIVE WOMEN DO NOT USE LONG TERM FAMILY PLANNING METHOD?.....
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Thank you for participating in the study