FERTILITY DESIRES AND CONTRACEPTIVE PRACTICES AMONG HIV POSITIVE ADULTS AT NAIVASHA DISTRICT HOSPITAL

INVESTIGATOR

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DEDICATION

This book is dedicated to my mother, Agnes Kabura Mwangi-Mbuthia, and all HIV positive men and women and their lovely children- present, past and future.

ACKNOWLEGEMENT

I sincerely thank the Almighty God for giving me the guidance, strength and wisdom not only to conduct this research, but also in guiding me in my postgraduate program and all other endeavors.

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Acronyms and abbreviation

AFASS Acceptable, Feasible, Affordable, Safe and Sustainable

AIDS Acquired Immuno Deficiency Syndrome

ANC Antenatal Care

ART Assisted Reproductive Technology

CCC Comprehensive Care Clinic

COC Combined Oral Contraceptives

CT Counseling and Testing

DH District Hospital

DRH Division of Reproductive Health

EBF Exclusive Breastfeeding

FANC Focused Antenatal Care

FP Family Planning

HAART Highly Active Anti Retro Viral Therapy

HIV Human Immuno-deficiency Virus

IEC Information, Education and Communication

IUD Intra Uterine Contraceptive Device

IQR Inter Quartile Range

KAIS Kenya AIDS Indicator Survey

KDHS Kenya Demographic Health Survey

LAM Lactational Amenorrhea Method

LTCM Long Term Contraceptive Methods

MCH Maternal and Child Health

MOH Ministry of Health

NASCOP National AIDS and STDs Control Program

NHSSP National Health Sector Strategic Plan

OIs Opportunistic Infections

PMTCT Prevention of Mother to Child Transmission

PNC Postnatal Care

PPH Postpartum Hemorrhage

POP Progestin Only Pill

PP Postpartum

RH Reproductive Health

SRH Sexual Reproductive Health

STI Sexually Transmitted Infection

TL Tubal Ligation

WHO World Health Organization

ABSTRACT

Summary:

In Kenya, there over a million adults of reproductive age living with HIV/AIDS. Increased availability of HAART has resulted in improved sexual and physical health, resulting in increased risk of intended and unintended pregnancies. Their reproductive intentions have not been well defined. This study aimed to determine the fertility desires and its determinants and contraceptive practices of HIV positive adults at Naivasha District hospital.

Objectives:

To determine fertility desires and contraceptive practices of HIV positive adults attending the care and treatment center of HIV infected adults at Naivasha level IV Hospital.

Methods

This was a cross-sectional study assessing the fertility desires and contraceptive practices of HIV positive adults at Naivasha District Hospital. A structured pre-coded questionnaire that assessed socio-demographics, pregnancy intentions, contraceptive use, disease status, ART drug use, was administered to consenting HIV positive adults. Descriptive analysis of population characteristics, pregnancy intentions and contraceptive use were performed. Chi squares and t-test were performed to determine predictors of future fertility desires. Logistic regression was then applied.

Results:

Six hundred HIV positive adults were recruited. These included 300 men, age (median 41.3, (IQR) 34.5-48) and 300 women; age (median 36.2, (IQR) 29-42). Only 16.5% of women (n=297) and 24.4% of men (n=275) had pregnancy intentions. Women not on HAART (OR 0.62, CI 0.28-0.81, P value 0.009) and number of living children were significantly associated with pregnancy intentions of male (OR [95%CI], 0.04 [0.04-0.3]) and female (OR [95%CI], 0.1 [0.01-0.2]) HIV positive adults.. Among the 208 males who did not desire more children, 122 (58.7%) reported using contraception. Among the 248 women who did not desire more children, 126(50.8%) reported using contraception.

The most common method of contraception was male condom, reported by 106 (35.3 %) men and 118 (39.3%) women. Various reasons were given to explain lack of use of contraceptive methods among those not desiring immediate conception (n=118 women, n=45 men). The most common reason was infrequent/ no sex at 64 (54.2%) for women and opposition to FP use at 7 (15.6%) for men

More men than women were sexually active, 85.8% versus 55.5%. Men reported having more sexual partners in the last 3mo, with 17.5% having more than two partners, compared to 1.6% of women.

Conclusion:

HIV positive men and women desire fertility. Their fertility intentions are comparable to those of the general population among those desiring fertility. In the CCC where HIV care is provided, treatment of both partners and their infants should be ensured. The CCC need to develop

programs that educate patients on modes of maximizing safer pregnancies for their HIV positive clientele.

For the HIV positive men and women who do not desire fertility, they should be assisted to access family planning services to avoid unplanned pregnancy.

Sexual activity among HIV positive men and women with some having two or more partners, with or without desire for conception, further illustrates the positive living of these clients which is a critical component of their everyday life. Their needs have to be addressed in their HIV care and treatment and not just emphasis on HAART compliance.

There was a high unmet need for contraception in this particular group of clients. This increases the risk of unintended pregnancies.

Recommendations:

Strategies need to be put in place that increases the uptake and use of contraceptive methods. This may include but not limited to educating the patients on the availability of FP methods, inquiring from them which FP methods they use and reasons why they choose not to use an FP method.

The pregnancy intentions of HIV positive clients need to be addressed by offering them ways they can achieve safe pregnancies by reducing the risks of horizontal transmission of HIV. They need to be evaluated using CD4, Viral load and screened for opportunistic infections.

BACKGROUND/ LITERATURE REVIEW

In Kenya, the prevalence of HIV among adults in the age bracket 15-49 years is 7.4%[1]. It is estimated that there are between 1.3 million to 1.6 million adults living with HIV/AIDS, most of who are in the reproductive age group[2]. Reproductive health intentions of HIV infected adults are not well defined. In the past few years increased availability of HAART has served to transform HIV infection from a uniformly fatal condition to a chronic illness. Antiretroviral therapy (ART) restores health and fertility in people living with HIV and drastically reduces mother-to-child transmission (MTCT) of HIV[3, 4]. With the ART reducing vertical transmission, morbidity and mortality in HIV positive women, more women desire to get pregnant[5-9].

There has been limited attention to provision of appropriate reproductive health services for HIV positive women and men. Reproduction in HIV has been a contested area due to the individual and public health concerns on transmission, re-infection and perinatal HIV infection when unprotected sex is practiced[10]. Despite a HIV diagnosis, many men and women still have a strong desire to be biological parents[11]. Societal and cultural norms regard childlessness as stigmatizing in many setting. However, being HIV positive comes with fears concerning infecting the unborn child. Some known behavioral, contextual and socio-cultural factors determinants of fertility include length of use of HAART, knowledge of spouses HIV status, knowledge of PMTCT interventions, availability of FP, ART, HAART and PMTCT services to name a few.[3, 12-21]

The reproductive choices of HIV positive men and women and the impact that HAART has had on the decision-making process in Kenya has not been exhaustively explored. With new evidence suggesting that the HIV 1 risk of transmission increases two-fold in pregnancy[22] it is

paramount to fully endeavor to understand the determinants of fertility in this at-risk group. In addition, despite the essential role of men in the reproductive process both in terms of biology and through their importance to household decision making, the relationship between HIV and fertility for African men has been almost entirely overlooked in the literature.[11]

Many HIV infected adults are resuming sexual activity with or without desire for future fertility[3, 4, 23, 24, and 25]. The potential for preventing unintended pregnancies has not been fully utilized[26, 27]. In developing countries and countries in transition, more than 120 million couples have an unmet need for safe and effective contraception despite their expressed desire to avoid or to space future pregnancies[27]. Globally, 215 million women in the developing world have unmet needs for family planning[28]. About 80 million women every year have unintended or unwanted pregnancies, some of which occur through contraceptive failure, as no contraceptive method is 100% effective[27]. In Kenya, among all currently married women, almost half do not want to have another child (49 percent), and an additional 5 percent are already sterilized[1]. Over one quarter (27 percent) of married women would like to wait two years or more for their next birth, and 14 percent would like to have a child soon (within two years)[1]. The remainder is uncertain about their fertility desires or says they are unable to get pregnant (infecund) [1]. Proportions are similar among currently married men, though men tend to be slightly more pro-natalist than women[1]. The 2007 -Kenya AIDS Indicator Survey found a huge unmet need of FP among HIV positive women at 60% i.e. Among HIV-infected women, 66.8% reported wanting to delay pregnancy by two or more years; 40.5% of these women were using modern contraception.[29]

Family planning services must be available, affordable, and accessible to allow people to realize their fertility preferences[1]. Women need information and education to enable them makes the right reproductive health choices without risking transmission [30, 31]. According to a 2007 Guttmacher Institute study, one in four married women in Sub-Saharan Africa is sexually active and does not want to have a child or another child in the next two years, but is not using any method of contraception. Unintentional pregnancy prevention is therefore a practical reality[32].

The Kenyan contraceptive prevalence rate amongst married women is 46 percent[1]. The national unmet need for family planning is 26%, 31% in Rift Valley Province[1]. Only 64 percent of the total demand for family planning is met[1]. The proportion of women who want no more children is 54%[1].Many women have limited access to FP during the immediate postpartum period. The median birth interval is 33.1 months[1]. Twenty three percent of Kenyan children are born fewer than 24 months after a previous birth. Many of these births are unintended[1]. Integrating FP with other health services during and after pregnancy can help increase access to and use of contraception, thereby reducing unmet need and preventing unintended pregnancies. However, even where women receive counseling on FP in PMTCT programs, use of contraceptives and condoms is low. HIV positive women must "have the right to decide freely and responsibly on the number and spacing of their children"[28]. Understanding and meeting women's sexual and reproductive health needs ensures that she has control over her reproductive career. This is turn reduces the maternal morbidity and mortality[33].

Throughout the world, many women use the return of their menstrual period as a signal to begin using contraception, yet the return of menses may indicate that fertility returned several weeks before, thus leaving up to 10 percent of women at risk of becoming pregnant before their menses

resume. The Lactational Amenorrhea Method (LAM) is a first short term contraceptive method for women who are fully breastfeeding, who have not resumed their period, and who are less than six months postpartum; when practiced correctly it can be more than 98 percent effective. In addition to delaying a subsequent pregnancy, exclusive breastfeeding also contributes to improved child survival. WHO promotes the benefits of exclusive breastfeeding among HIV positive women where supplemental feeding is not acceptable, feasible affordable, safe or sustainable[34].

One of the targets in Kenya's second National Health Sector Strategic Plan (NHSSP) is to reduce the level of unmet need by increasing the contraceptive prevalence rate to 45% by 2007 and to 60% **by 2010.** Providing contraception can have a major impact on reducing HIV-positive births and, by extension, the number of AIDS orphans[35]. As many as an additional 160 000 HIV-positive births could be averted every year[36]. Contraceptive use in sub-Saharan Africa may already be preventing 22 percent of HIV-positive births, despite the fact that contraception is not widely available in sub-Saharan Africa[37].

The five core aspects of reproductive and sexual health include providing high-quality services for family planning, including infertility services; and promoting sexual health[27]. The eight pillars of safe motherhood from DRH mirror these. Well-designed and effectively delivered reproductive and sexual health services, especially those involving community participation, can also contribute to improved user-provider relations, men's participation, and women's empowerment to make reproductive choices services have a key role to play in providing information and counseling in promoting sexual health. Appropriate information can also contribute to better communication between partners and healthier sexual decision-making,

including abstinence and condom use[27]. In the HIV context, more emphasis is on treatment compliance to HAART and the baby's development than IEC on FP[38].There is also an unmet communication need about providing appropriate preconception counseling and discussing reproductive plans especially to older women[39].

This study aimed to explore the reproductive health choices and the determinants of such decision making in HIV positive men and women at Naivasha DH. These findings may provide the necessary information for informing policy and practice for counseling and care of HIV-positive adults in the reproductive age years.

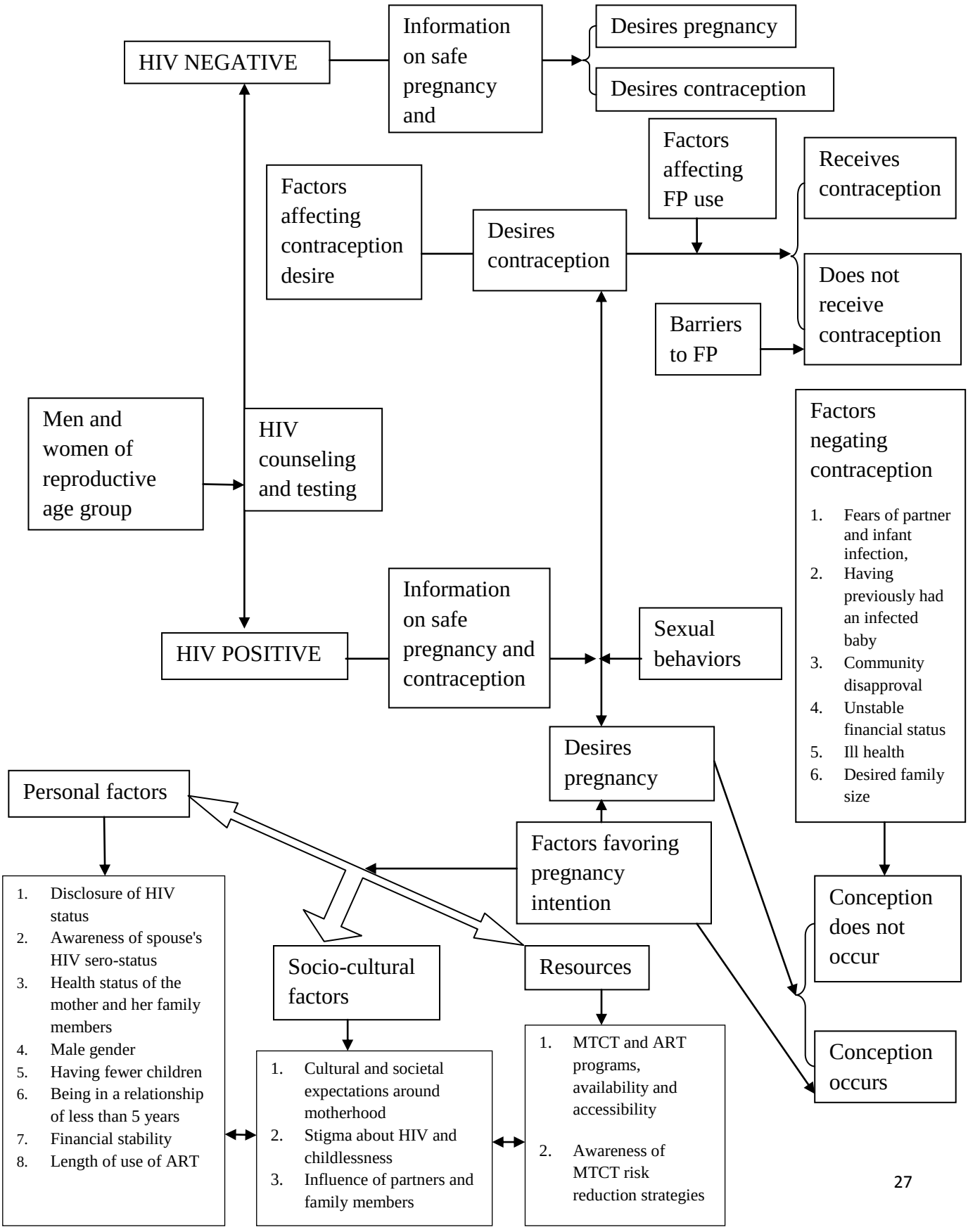
JUSTIFICATION/ RATIONALE

HIV positive individuals like their HIV negative counterparts have fertility desires. Information is lacking on these fertility intentions. The role of men in decision making has also been majorly neglected. With the use of HAART, these individuals are healthier and are more likely to desire pregnancy. The FP use is low at 46% among married women. This however is an increase from the previous 39% in KDHS 2003. An integration package for each level of health care system should ensure all the four PMTCT prongs are implemented within MCH and RH services. The unmet need for FP services rendered to mothers stems largely from a lack of IEC emphasized throughout the ANC, MCH and PNC. FP services are not routinely offered to mothers when they bring their infants to the MCH. This is left until 6 weeks post-partum or even up to six months, at a time when the mother ceases EBF if she had met the criteria for same. This criterion requires EBF to be Acceptable, Feasible, Affordable, Safe and Sustainable (AFASS). The fertility needs

of women therefore will be influenced by this and the outcomes of the same may result in a lapse in prong two of PMTCT interventions. This directly impacts on maternal health.

CONCEPTUAL FRAMEWORK

Determinants of fertility involve interplay of various social cultural, economic and gender-related factors. These affect HIV positive men and women on an individual, family and community level. Since the introduction of HAART, these individuals are healthier, have improved quality of life and live longer. These determinants have been diagrammatically represented from my literature review and summarized in the table below.


HIV NEGATIVE
Information on safe pregnancy and
Desires pregnancy
Desires contraception
Factors affecting FP use
Receives contraception
Factors affecting contraception desire
Desires contraception
Does not receive contraception
Barriers to FP
Men and women of reproductive age group
HIV counseling and testing
Factors negating contraception
1. Fears of partner and infant infection,
2. Having previously had an infected baby
3. Community disapproval
4. Unstable financial status
5. Ill health
6. Desired family size
Information on safe pregnancy and contraception
HIV POSITIVE
Sexual behaviors
Desires pregnancy
Personal factors
Factors favoring pregnancy intention
Conception does not occur
1. Disclosure of HIV status
2. Awareness of spouse's HIV sero-status
3. Health status of the mother and her family members
4. Male gender
5. Having fewer children
6. Being in a relationship of less than 5 years
7. Financial stability
8. Length of use of ART
Socio-cultural factors
Resources
Conception occurs
1. Cultural and societal expectations around motherhood
2. Stigma about HIV and childlessness
3. Influence of partners and family members
1. MTCT and ART programs, availability and accessibility
2. Awareness of MTCT risk reduction strategies

RESEARCH QUESTION

What are the fertility desires and contraceptive practices of HIV positive men and women at Naivasha District hospital CCC?

Null hypothesis

HIV positive men and women do not have their fertility desires reduced upon receiving a HIV positive diagnosis.

Alternate hypothesis

HIV positive men and women have their fertility desires reduced upon receiving a HIV positive diagnosis.

OBJECTIVES

Broad

To determine the fertility desires and contraceptive practices among of HIV positive men and women seen at the CCC clinic at Naivasha Hospital

Specific objectives

1. To determine sexual behaviors of HIV positive men and women at Naivasha District hospital
2. To determine the pregnancy intentions of HIV positive men and women at Naivasha District Hospital

3. To determine the utilization of and preferred FP method used among those HIV positive patients without desire for immediate conception.
4. To describe reasons for FP non-use among HIV positive patients without desire for immediate conception.

METHODOLOGY

Study design

This is a cross-sectional study that was carried out between June to August 2012. The principle investigator solely administered a structured questionnaire on 300 HIV positive women and 300 HIV positive men seen at the Naivasha District Hospital CCC between July to September 2013 to determine their fertility desires and contraceptive practices.

Study Area

The study area was at Naivasha District Hospital.

Naivasha District Hospital is the second largest hospital in Nakuru County, Rift Valley Province. It is a public Hospital run by the Ministry of Medical Services, located in Sokoni Location, Lakeview Sub location. The facility's Comprehensive Care Centre (CCC) serves as both a primary care center and public referral center for mothers and children affected and infected by HIV/AIDS. The clinic offers separate services for children and Adults. Currently, the center has approximately 4697 HIV infected persons ever enrolled into care, including exposed babies, children, adult males and females both active and lost to follow-up. PMTCT services are carried out in Maternity, Child Welfare Clinic (CWC), the Comprehensive Care Clinic (CCC) and the

Pharmacy. Other services offered at the CCC are provision of HAART and treatment of OI. All HIV positive adults at the facility are seen here and therefore an optimal clinic for the study.

Study population and sampling-inclusion/exclusion criteria, formulae, sampling method, recruitment and consenting procedures

The study population was HIV positive men and women seen at the CCC clinic at Naivasha District Hospital who met the inclusion criteria.

Inclusion criteria

1. All HIV positive women enrolled for care at the CCC, whether on HAART or not, between the ages of 18 to 49 years.
2. All HIV positive men attending the CCC whether on HAART or not between 18 to 49 years.
3. HIV positive patients who are not too ill (physically and mentally) to provide informed consent and participate in the interviews (based on the judgment of the clinic nurses and interviewers).
4. HIV positive clients who have had at least one visit to the clinic

Exclusion criteria

1. HIV positive Men and Women not consenting for inclusion in the study
2. HIV positive women currently pregnant

SAMPLE SIZE DETERMINATION AND FORMULAE

Fisher's formula for estimating means and proportions with finite population correction was used to determine the sample size.

$n^1=NZ^2p\ (1-p)/\ d^2(N-1)+Z^2p(1-p)$

Where;

n^1*=sample size with finite population correction*

N=population size. Total adult HIV positive men and women in Naivasha CCC who are active on care are 1356 and 1480 respectively.

p= proportion in target population estimated to have certain characteristics. 50% has been used as the fertility desire for men as this has not been identified. 42.6% is used for women according to KAIS 2007.

z=1.96 z value at 95% confidence

d=precision=0.05

Therefore; men

$n^1=1356X1.96^2X(0.5(1-0.5))/\ 0.05^2(1356-1)+1.96^2X0.5(1-0.5)$

$n^1=1356X3.8416(0.25)/0.0025(1355)+3.8416X0.25$

$n^1=1302.3024/4.3479$

$n^1=299.52$

$n^1=300$ *men.*

For women,

$n^1 = 1480X1.96^2X(0.426(1-0.426)/ 0.05^2(1480-1)+1.96^2X0.426(1-0.426)$

$n^1 = 1480X3.8416(0.244524)/0.0025(1479)+3.8416X0.244524$

$n^1 = 1390.2578/$

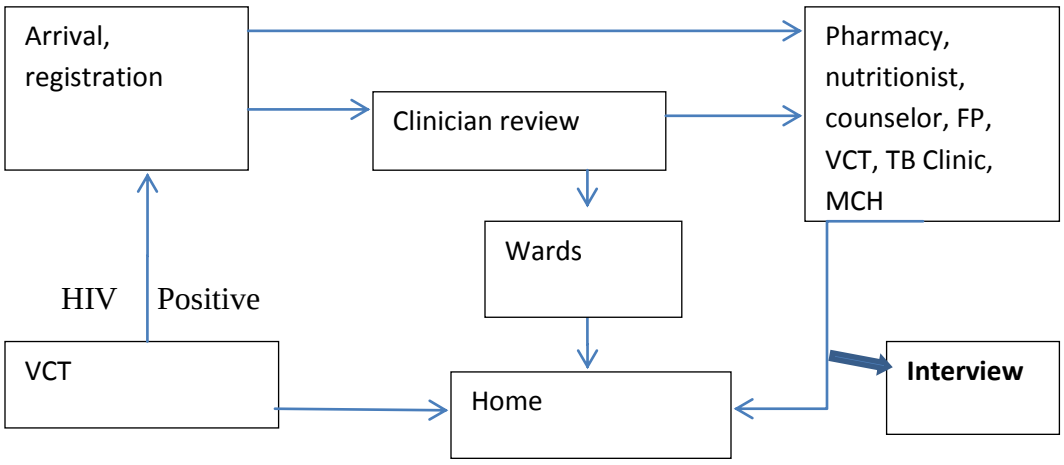
$n^1 = 299.827$

$n^1 = 300$ *women*

Recruitment and consenting procedure

The study participants were identified as follows: initial screening using medical records of HIV positive men and women booked for their CCC visit daily were carried out to identify potential participants, according to inclusion/exclusion criteria. After the clients have received the CCC services, the principle investigator informed the clinicians to refer them to the study room where the interviews were conducted in a safe, secure and confidential environment.

The client flow is provided below.



Both men and women were recruited when they came for CCC services.

The participants were selected by convenience sampling where consecutive consenting HIV positive adults were recruited until the desired sample size was reached. The principle investigator was responsible for conducting all interviews. Once there, the clients were informed about the study, its objectives, risks and benefits. If they are willing to participate, they were requested to provide written consent. Medical records were examined and the patients were interviewed. The questionnaire was then administered. A code was used for each of them. Double participant recruitment was prevented by enquiring from the client if they have completed the interview before. In addition, since data collection was not expected to take longer than 30 days and there was no monetary incentive given to the participants, it is unlikely that a study participant went through the process more than once.

Study instrument

A structured pre-coded questionnaire was used. This was interviewer-administered face-to-face. Interviews were conducted solely by the principal investigator who was proficient in written and spoken English or the local languages, Kiswahili and Kikuyu. If the need arises, depending on the preferences of the respondents, the principal investigator used these languages and provided the consent form in the appropriate translated version. The questions tackled the socio-demographic aspects of the clients, their fertility intentions and knowledge and use of contraceptive methods.

DATA MANAGEMENT

Data collection/ entry

Data was collected by the principle investigator. A pre-tested structured questionnaire was used for data collection. Clients accessing the CCC were selected by convenience sampling method.

Quality assurance procedures

Pretesting of the pre-designed questionnaire guide was carried out both on ourselves and at Naivasha District Hospital before actual data collection. The questionnaires were analyzed. Feedback obtained informed the changes and adjustments that needed to be addressed before a final draft is made for administration to the research participants. In order to avoid double recruitment, the participants' file numbers were entered in a register upon recruitment for

serialization. This register was counter checked on a regular basis for any double entries and if so discovered, one of the questionnaires were withdrawn and discarded and the serialization rectified before recruitment was continued.

Data management

Data collected was entered into an SPSS database by the principal investigator. Each record was assigned a unique identifier and names were dropped so as to maintain participants' confidentiality. Quality of data was assessed by conducting consistency checks. Data was stored in a password protected computer.

Data analysis plan

- The data collected was transferred into a Microsoft Access database and the analyzed using SPSS software. A descriptive analysis included measures of central tendency like the mean, measures of variability like standard deviation and range and univariate analysis. An inferential analysis was conducted using chi square for categorical factors e.g. gender, marital status, occupation and T-test for continuous variables e.g. age. Finally a multivariate analysis was undertaken assessing for outcomes (categorical data) using logistic regression.

Research timelines

The research plan was as follows:-

1. Proposal writing – November 2011 –March 2012
2. Ethical committee revisions and corrections – March to July 2012
3. Data collection- July-September 2012
4. Data analysis- September –December 2012
5. Departmental presentation, corrections and writing of thesis- January –November 2013

Activity Description (Examples)	**Time Period / Duration (Weekly, monthly, quarterly, yearly, etc.)**												**Expected Output / Outcome**	**Resources Required**	**Responsible persons**
	N	D	J	F	M	A	M	J	J	A	S	N			
Submission of project proposal to MEPI committee c/o Principal CHS	X	X											Funding approved	Stationery, printing & photocopy costs for application to MEPI	Wangeci
Development of individual project proposal		X	X	X	X								Fully developed project proposals	Internet access, Stationery, printing & photocopy costs	Wangeci
Application for approval of individual project proposals to the					X	X	X	X					Project proposals approved	Application fee	Wangeci

KNH/UoN ethics committee														
Pretesting of data collection tools									X				Tested data collection tools		All team members
Data collection consolidation and analysis									X	X	X		Data collected in tools	Research assistants, data analyst, communication, transport	All team members
Compilation of study results and presentation										X	X	X	Complete study report, presentation	Stationery, printing, photocopy	Wangeci

Plans for dissemination and utility

The plans are as follows:-

- Publication as a dissertation in partial fulfillment for the award of the degree of Master of Medicine in Obstetrics and Gynecology of the University of Nairobi.

Depending on the results;

- Give to Naivasha DH CCC to adopt appropriate changes in the Reproductive health management
- Share with MOH to advice on policy and further research.
- Publication in local and international journals.

RESULTS

Table 1: Characteristics of HIV positive adults enrolled in the study at Naivasha District Hospital CCC Clinic

Characteristic		N (%), median (IQR)			
		Women (N = 300)		Men (N = 300)	
Age		36.2(29-42)		41.3, 34.5-48	
Marital status	Single	48	(16)	25	(8.5)
	Married	127	(42.3)	161	(54.4)
	Co-habiting	14	(4.67)	66	(22.3)
	Divorced	66	(22)	15	(5.07)
	Widowed	45	(15)	29	(9.8)
Education	None	29	(9.7)	22	(7.4)
	Primary	169	(56.3)	107	(36.1)
	Secondary	89	(29.7)	117	(39.5)
	College	13	(4.3)	44	(14.9)
	University	-		6	(2.0)
Employment	Unemployed	78	(26)	128	(43.2)
	Salaried job	109	(36.3)	96	(32.4)
	Self-employed	36	(12)	45	(15.2)
	Casual labourer	26	(8.7)	7	(2.4)
	Housewife/husband	51	(17)	20	(6.8)
Religion	Catholic	70	(23.6)	132	(44.8)
	Protestant	209	(70.4)	137	(46.4)
	Muslim/Hindu	6	(2.0)	12	(4.1)
	Others	12	(4.0)	14	(4.8)
Duration of	0 - 1 yr	26	(11.1)	11	(3.9)
Relationship	2 - 5 yrs	70	(29.8)	38	(13.6)
	>5 yrs	139	(59.2)	230	(82.4)
HIV Status	Negative	-		42	(17.5)
	Positive	-		198	(82.5)
Disclosure of status					
to partner	Yes	148	(62.7)	229	(87.7)
	No	64	(27.1)	31	(11.9)
	N/A-(widowed)	24	(10.2)		
Partner type	Spouse	167	(71.7)	214	(78.1)
	Steady	27	(11.6)	36	(13.1)
	Casual	39	(16.7)	24	(8.8)

A total of 600 clients were enrolled into the study, 300 men and 300 females. The median age was 36.2 (29-42) for women and 41.3 (34.5-48) men. Majority were married, 127(42.3%) women and 161(54.4%) men. Only29 (9.7%) women and 22(7.4%) men had no formal education with no female having had university training compared with 6 (2.0%) of men. Unemployment was rampant especially for men with 128(43.2%) of them jobless. This was a predominantly Christian community touting approximately 95% for both males and females. About half were married 127 (42%) women, 161(54%) men) with 139 (59.2%) women and 230 (82.4%) men in long term relationships spanning over five years.

Men and women in casual relationships represented 8.8% and 16.7% of the population sampled respectively Most had disclosed their HIV status to their partners (148 (62.7%) women, 229 (87.7%) men). The parity of women was as follows: 19(6.4%) were para 1, 130 women (43.6%) were para 2, 105(35.2%) were para 3, 44(14.8%) were para 4. Average living children were 2.7 for women and 3.8 for men.

Some questions were not answered. This explains why the numbers do not add up to 300 on all the sections.

Sexual behaviors of HIV positive men and women

Table 2: Sexual behavior of HIV positive adults at Naivasha District Hospital CCC

	Women (N=290)		Men (N=288)	
	N (%)		N (%)	
Sexually active				
Yes	161	(55.5)	247	(85.8)
No	129	(44.5)	41	(14.2)
Number of partners (last 3mo)	*		+	
0	85	(34.6)	12	(4.5)
1	157	(63.8)	210	(78.1)
2 to 4	4	(1.6)	47	(17.5)
Frequency of coitus	**		++	
Per week	68	(38.9)	167	(63.9)
Per month	25	(14.3)	70	(26.8)
Last 3mo	15	(8.6)	23	(8.8)
Other	66	(37.7)	1	(0.4)
Duration of abstinence (postpartum)	***			
6 weeks	35	(17.9)		
7-12 weeks	137	(70.3)		
6 mo	15	(7.7)		
<12mo	8	(4.1)		

*** n=246** ***** n=195** **++ n=261**

**** n=175** **+ n=269**

There was a high opt out rate for these questions of a private nature. The respondent numbers are shown below the table.

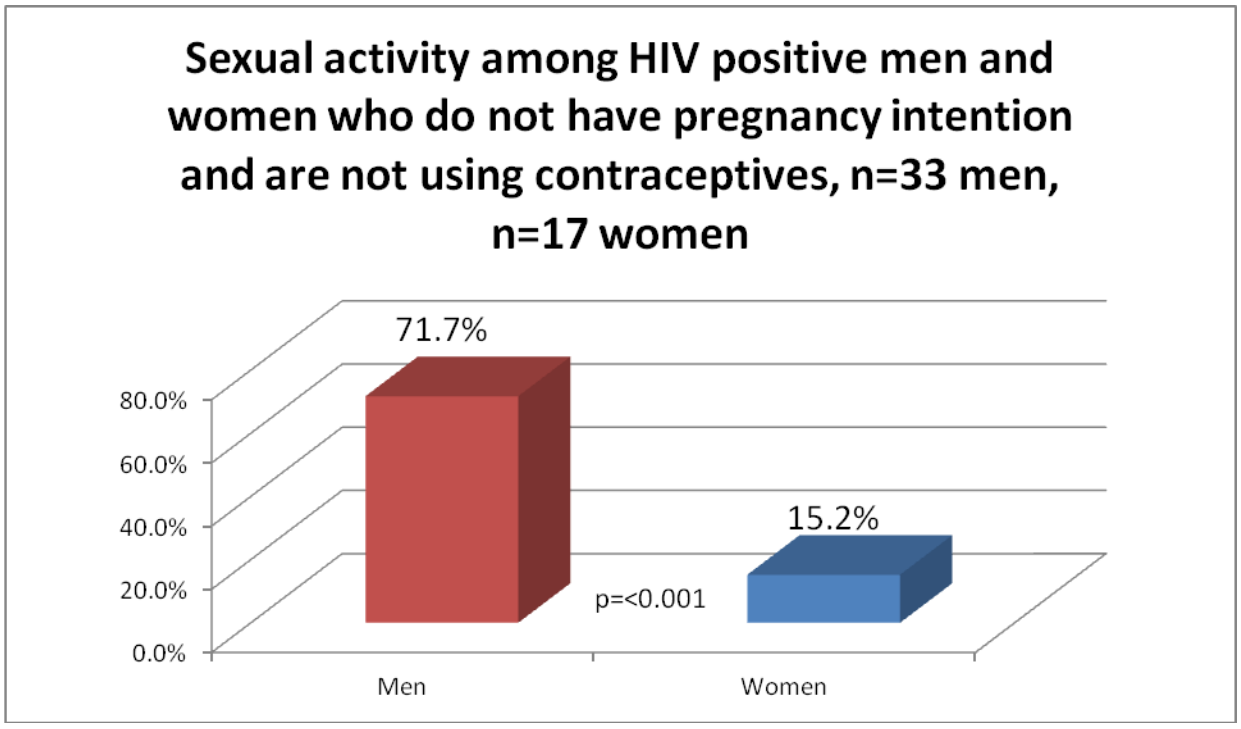
Overall 161 (55.2%) women and 247 (85.8%) men were sexually active. Four (1.6%) women and 47 (17.5%) men had two or more sexual partners in the three months preceding the study.

Among the 247 sexually active men were 46 men who did not desire fertility. Of these, 33 were not on any contraceptive method, representing 71.7%.

Among the 161 sexually active women were 112 women who did not desire fertility. Of these, 17 were not on any contraceptive method, representing 15.2%.

The 71.7% men and 15.2% women represents a high risk group of individuals for horizontal and vertical transmission of HIV. This is illustrated in diagram 1 below.

Diagram 1: Sexually active men and women who have no desire for future fertility and are not on contraception, Men, n=33; Women, n=17



Pregnancy intentions of HIV positive men and women at Naivasha District Hospital

Only 49(16.5%) of the females and 67(24.4%) of the men had desire to have children either immediately or in the future.

The same is illustrated in Table 3 below.

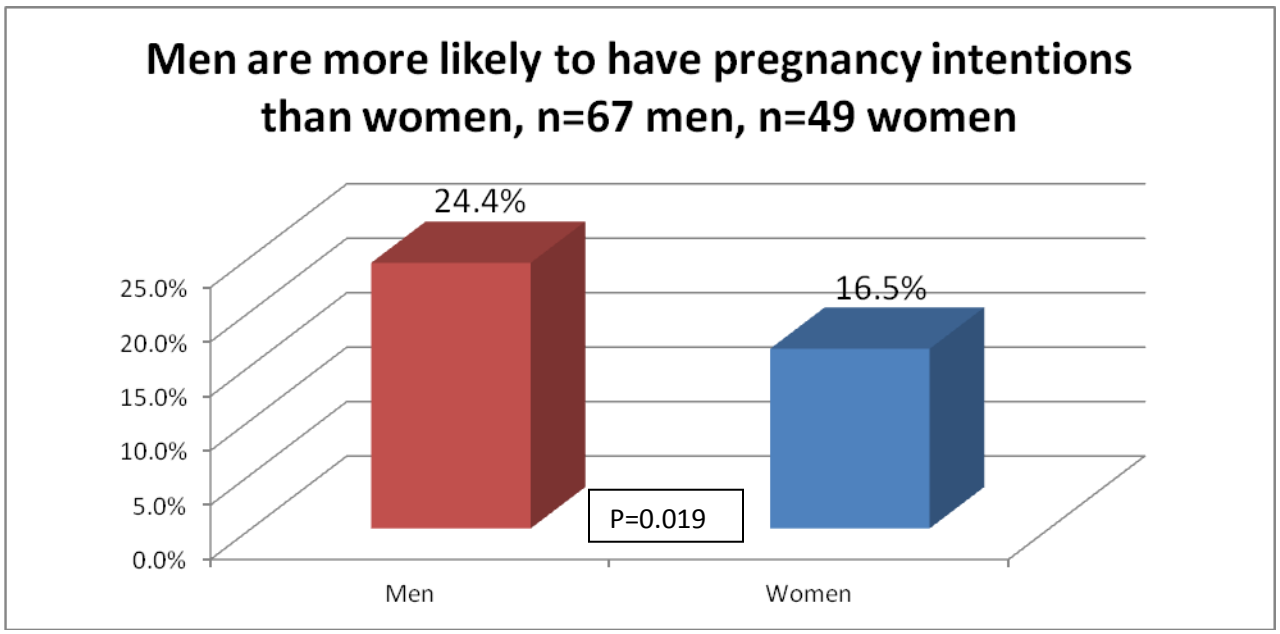
Table 3: **Pregnancy intentions of HIV positive men and women**

	Female (n = 297)		Male (n = 275)	
Pregnancy intentions				
Yes	49	(16.5)	67	(24.4)
No	248	(83.5)	208	(75.6)

Factors associated with pregnancy intention

HIV positive females were less likely to desire more children compared to HIV positive males OR= 0.61 [95%CI 0.40-0.94], p value= 0.019). This means men are more pronatalist than women. This is shown in Diagram 2 below.

Diagram 2: Comparison of men and women who had pregnancy intentions



Other factors associated with pregnancy intentions are shown in Table 4 below.

Table 4: Pregnancy intentions of demographic characteristics of HIV positive adults at Naivasha CCC

	Females (n = 297)			Males (n = 275)		
	OR	95% CI	P value	OR	95% CI	P value
Education level						
Primary	1.0	-	-	1.0	-	-
None	1.0	0.3-3.0	0.94	-	-	-
Secondary	1.7	0.9-3.3	0.13	1.1	0.6-2.1	0.76
College	1.1	0.2-5.2	0.91	2.0	0.9-4.3	0.08
University	-	-	-	0.7	0.1-6.0	0.72
Employment						
Unemployed	1.0			1.0		
Salaried	0.7	0.3-1.6	0.37	0.8	0.3-2.4	0.68
Self employed	0.6	0.3-1.5	0.29	0.7	0.2-2.3	0.58
Casual	0.7	0.2-2.2	0.57	0.8	0.2-2.8	0.73
Housewife/husband	0.7	0.2-2.6	0.62			
HIV positive children						
None	1.0			1.0		
At least 1	0.7	0.3-1.9	0.51	0.5	0.1-1.4	0.16
Number of living children						
None	1.0			1.0		
At least 1	0.1	0.01-0.2	<0.001	0.04	0.004-0.3	<0.001
HAART						
On HAART	1.0					
Not on HAART	0.62	0.28-0.81	0.009			

In this study, the two associations that determined fertility were individuals who had only one child or none and women not on HAART. Among the demographic characteristic only number of living children was significantly associated with pregnancy intentions of male OR=0.04 [95%CI 0.04-0.3], p value=<0.001 and female OR= 0.1 [95%CI 0.01-0.2], p value=0.01 HIV positive adults.

The number of females on HAART was 83% (n=249). Thirty percent of those not on HAART (n=14/48) desire children compared to fourteen percent of those on HAART (n=34/249), OR 0.62, [95%CI 0.28-0.81], P value 0.009.

The other associations like age, marital status, religion, employment, educational status and disclosure of status to partner were not statistically significant.

The p values for disclosure of status to partner were 0.279 for females and 0.78 for males meaning they were not statistically significant.

Utilization of and preferred FP method used

Table 5: Awareness of contraceptive availability among HIV infected adults at Naivasha

	Female (N = 300)		**Male (N = 300)**	
	N	%	N	%
Condoms				
Female	26	8.7	87	29.0
Male	219	73	245	81.7
Hormonal				
COC	228	76	107	35.7
Injectables	241	80.3	136	45.3
Implants	133	44.3	60	20.0
IUCD	165	55	86	28.7
Sterilization				
Female	67	22.3	39	13.0
Male	13	4.3	31	10.3
LAM	15	5.0	26	8.7
Traditional method	21	7.0	10	3.3
Folk	2	0.7	-	-
Other method*	13	4.3	11	3.7

CCC

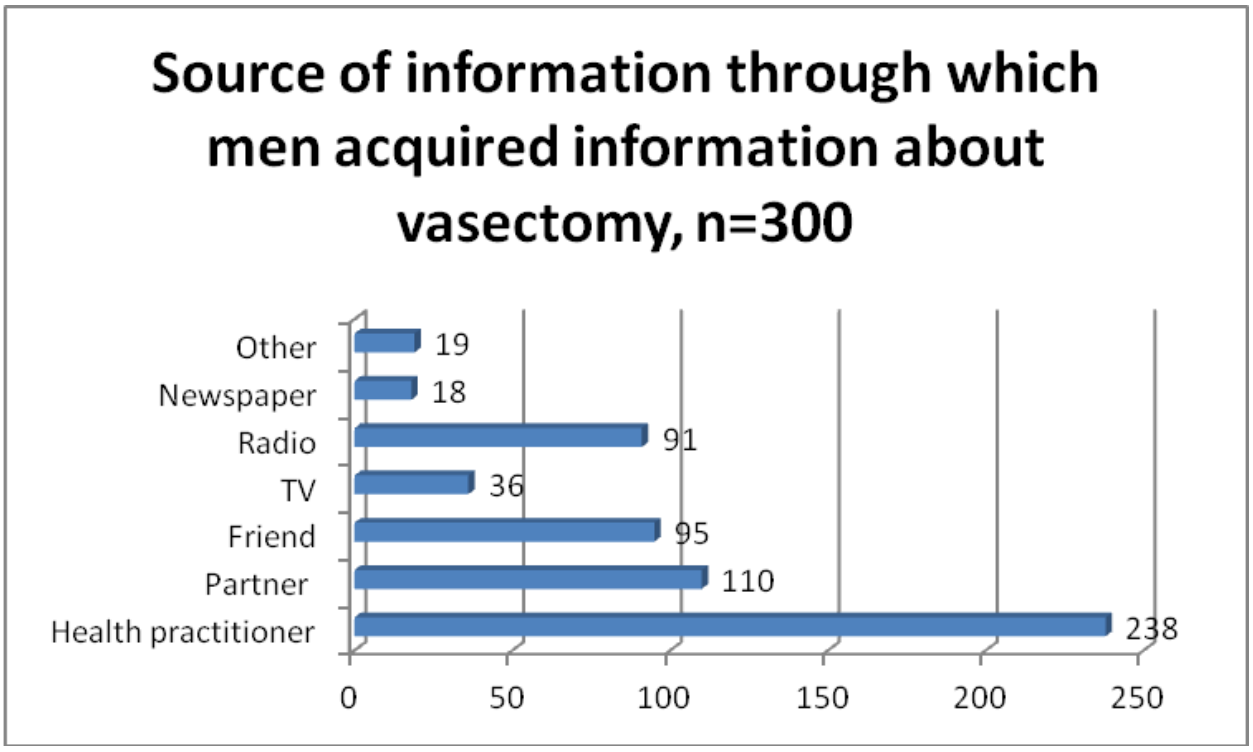
- Other methods represent the emergency pill

The figures do not add up to 300 on all rows because for each FP method not all 300 knew about its availability. For example under hormonal contraceptives, 228 knew about COC, 241 knew about injectables and 133 knew about implants.

Clients were asked about knowledge of contraceptive methods currently available to them, no prompt was given. The table above shows women knew most about injectables, 241 (80.3%) while men knew most about the male condom, 245 (81.7%).

The diagram below shows the medium through which information on vasectomy, one of the family planning methods available, had been acquired. Three men had undergone a vasectomy.

Diagram 3: The source of information through which men had acquired information on vasectomy



Contraceptive use

Overall 167 (55.6%) of women were using a FP method. Male condoms were the most common method of FP in both groups at 118 (39%) for women and 106 (35.3%) of men, followed by injectables at 44 (14.7%) women. None used traditional methods.

Table 6 represents the preferred mode of FP used by the total adults sampled

Table 6: Current contraceptive method used among all HIV infected adults at Naivasha CCC

	Female (N = 300)		**Male (N = 300)**	
	N	%	N	%
Condoms				
Female	0	0	22	7.3
Male	118	39.3	106	35.3
Hormonal				
COC	7	2.3	7	2.3
Injectables	44	14.7	29	9.7
Implants	15	5.0	17	5.7
IUCD	9	3.0	18	6.0
Sterilization				
Female	5	1.7	5	1.7
Male	0	0	2	0.7
LAM	0	0	1	0.3
Traditional method	0	0	1	0.3
Folk	0	0	-	
Other method	2	0.7	3	1.0

Among the 208 males who do not desire more children, 122 (58.7%) reported using contraception, 45 (21.6%) were not using any. 41 did not answer.

Among the 248 women who do not desire more children, 126(50.8%) reported using contraception, 118 (47.6%) were not using (limiters), 4 did not answer. The unmet need for FP among limiters is therefore 47%.

The preferred method of FP in this group was still the male condom with 88 (69.8%) women and 71 (58.2%) men followed by injectables, 38 (30.2%) for women. None used traditional methods of family planning.

Of the 49 women who desired fertility, 15 (30.6%) of them wanted to delay it by 2 or more years (spacers). Of these only 6 (40%) were using a contraceptive method, mainly the hormonal methods, COC. The unmet need for FP is therefore 60% for spacers.

Table 7: Current contraceptive use among HIV infected adults at Naivasha CCC who did not desire future fertility

	Female (n=126)		**Male (n=122)**	
	N	%	N	%
Condoms				
Female	0	0	4	3.3
Male	88	69.8	71	58.2
Hormonal				
COC	5	4	5	4.1
Injectables	38	30.2	12	9.8
Implants	15	11.9	9	7.4
IUCD	9	7.1	14	11.5
Sterilization				
Female	3	2.8	3	2.5
Male	0	0	0	0
LAM	0	0	0	0
Traditional method	0	0	0	0
Folk	0	0	0	0
Other method	0	0	1	0.8

The tally is greater than the N because some women and men used dual method of contraception i.e. they used a condom plus a hormonal method.

Of concern is the percentage of men and women who were not using contraceptives despite having no desire for children, that is 45 (21.6%) and 118 (47.6%) respectively. This increases the risk on unintended pregnancies and consequently vertical transmission of HIV.

Reasons to explain family planning non-use among those without desire for immediate conception

Table 8: Reasons to explain contraceptive non-use in the future

	Females (n=118)		Males (n=45)	
	n	%	n	%
Infrequent/no sex	64	54.2	4	8.9
Partner hysterectomy/menopause	11	9.3	3	6.7
Partner is breastfeeding	-		1	2.2
Partner is currently pregnant	-		0	0
Opposed to contraception use	0	0	7	15.6
Partner is opposed	2	1.7	0	0
Religious prohibition	1	0.9	3	6.7
*other	17	14.4	15	5

***** The other* represents men and women who could not explain why they were not on contraception, they had no valid reason

The tally is less than the n, because some women and men did not answer the question to explain a reason for FP non-use yet they had earlier said they do not desire fertility.

The men and women who were not using a contraceptive method despite having no desire for children were 45 and 118 respectively. Their reasons to explain family planning non-use were varied as shown in the table 11 above. The most common reason was infrequent/ no sex at 64 (54.2%) for women and opposition to FP use at 7 (15.6%) for men. There was only one identifiable barrier to explain non-use, religious prohibition, at 3 (6.7%) men and 1 (0.9%) women.

Other reasons explored but were not identifiable to the sampled population were; other close partner is opposed, not aware of any method, not aware of any source, dissatisfied with available options, access (distance, stock-outs), financial costs and inconvenient to use.

It is important to note that there were never stock-outs of family planning methods, they were easily accessible and were offered free of charge at Naivasha District Hospital CCC.

DISCUSSION:

The fertility desires among HIV positive adults in this study was 16.5% and 24.4% for women and men respectively. This shows that HIV positive adults desire fertility despite having a HIV diagnosis [11.] The proportion is similar to other local Kenyan data. The fertility desire among all current married women in Kenya is 14% and 27% for those who want immediate conception within two years and after two years respectively[1]. The fertility desire among HIV positive women is 24% for immediate conception and 18.6% for future conception[29]. Among HIV negative women this stands at 38.5%[29]. Elsewhere in the world the fertility desire is 34% in Papua New Guinea, 28-9% in USA, and ranges between 15%-55% in East and Central Africa and 63.3% in Nigeria[40]. All these studies show that HIV adults desire fertility. The proportion is higher in Central and Western Africa than in Kenya. This could be attributed to some factors in these areas that are not generalizable to the whole of the African continent. There were no studies quoting the fertility desire in HIV positive men and so this was a first of its own. Though seemingly a small percentage, it represents an important population for stakeholders, policy makers and health care providers. A fifth of PLHA in this set-up need to have access to information on family planning and safe reproductive health practices in order to make right decisions about their families.

In this study being on HAART made women less likely to desire fertility than other women not on HAART. This may be due to the fact that women not on HAART deemed themselves healthier than their HAART counterparts because of their CD4 being high, a lack of OI and so were not eligible to begin HAART. Peoples on HAART are less likely to desire pregnancy. With

the introduction of HAART, their health and general well being is restored, with increased physical and hence sexual activity [3, 4]. HAART also reduces vertical transmission of HIV and therefore increases fertility desire [5-9.] Understanding their reproductive health intentions is therefore paramount so as to limit risk for vertical and horizontal HIV transmission.

The second determinant of fertility was men and women who had no child were more likely to desire fertility than men and women with at least one living child. This may be due to the need to be a parent a HIV diagnosis notwithstanding. The HIV status of the child, living or dead was not significant. This finding was similar to a meta-analysis of twenty studies from different parts of the world demonstrated that age less than 30 and having no child were the only two variables with strong association to fertility desire [40].

Other determinants of fertility that were reviewed in this study were age, marital status, religion, employment, educational status and disclosure of status to partner. The overall odds ratio did not show statistically significant association and hence were not associated with pregnancy intention. Other studies have demonstrated the determinants of fertility desires to include factors like Personal; e.g. disclosure of HIV status, awareness of spouse's HIV status, perceived maternal health status, male, age, having fewer children, financial stability, length of use of HAART, FP use, married, Socio-Cultural; e.g. expectations around motherhood, stigma about HIV and childlessness, influence of partners and family members and availability/ accessibility of MTCT and HAART services and risk reduction strategies[3, 12-25]. None of these were statistically significant in this study. Only two variables with strong association to fertility desire were identified as age less than 30 and having no child [40]. In this study the duration since HIV

diagnosis, HAART experience, CD4 experience was not considered. Their significance as determinants of fertility cannot be determined.

The contraceptive prevalence rate was 55.6% among the HIV infected females. This is higher than the national average of 46% among married women[1] and 47.6% among HIV positive women[29]. This shows the measure of population coverage of contraceptive use, taking into account all sources of supply and all contraceptive methods. In this study the contraceptive methods were supplied free in the facility, were easily accessible and never had stock-outs. They knew about available FP methods. They got information about FP methods from their health care providers, family, friends and electronic media. Availability of these FP programs and education on the same helps individuals make informed fertility choices [1, 27, 30, 31, 38, 39]. FP also reduces AIDS related deaths and orphaning [35, 36, 37]. The men are not represented as they reported family planning use in the second person, i.e. what their partners used culminatively. The only contraceptive method available for male use alone is the male condom. This would therefore not be a personal representation of their use or non-use.

Male condom use in this study was 39.3% and 35.3% among all women and men respectively, and among those women and men without desire for future fertility at 69.8% and 58.2% respectively. Female condoms were also used. Consistent and correct condom use has 80% or greater protective effect against the sexual transmission of HIV and other STIs [43, 44, 45]. Consistent condom use for women and men between 15-24y has been reported at 11% and 43% respectively[42]. This reduced to 5% and 14% among 25-64y old women and men respectively[42]. One study in Tanzania noted that 16% of their study participants used condoms consistently in

the six months preceding the study, with age and knowledge of partner HIV status being strong predictors of their use[46].

Dual method of contraception is preferred because it protects against horizontal spread of HIV and other STI while preventing unintended pregnancies by using an additional method of contraception, preferably a long-term contraceptive method (LTCM). 22.4% of women were using a LTCM, with none using traditional methods. This minimizes the risk of unintended pregnancies and leaves a significant proportion of women still at risk of getting an unplanned pregnancy. It is lower than the national average of 29% of women using LTCM, and 39% using a modern method of FP[1]. The most commonly ever used methods among all women and currently married women are injectables (22%) and pills (7%), whereas sexually active unmarried women are most likely to have ever used the condom[1]. Preventing unintended pregnancies is therefore still a challenge [26, 27].

The unmet need for FP among HIV positive women was 60% in this study which compares with KAIS[29]. But this is much higher than the national unmet need for contraception which is 26% and 31% in Rift valley[1] where Naivasha District Hospital is based. This unmet need for FP further compounds the issue of having an unintended pregnancy. This is more so for the individuals who had no pregnancy intention and were not using a FP method which in this study was high at 21.6% men and 47.6% women.

A variety of reasons were cited to explain FP non-use. A good proportion could not identify a reason why they chose not to use a family planning method and 15.6% of men were opposed to FP use. This group would benefit from FP education which would describe reasons why they were opposed and help improve uptake. In Kenya, method related reasons were most cited[1]

including health reasons, side effects at 38.4%. These were not a major concern in this study. 6 to 9% cited infrequent sex as a reason[1] which is much lower than the study result, which was at 54.2% for women. This emphasizes the need of talk to these women at their point of care to better understand their low perception of risk to pregnancy and other STI.

However condom use or LTCM are not practical among couples who have desire for fertility. The latter will most likely be engaging in unprotected sex which raises concerns for increasing risk of HIV transmission among discordant couples and resistance to medication arising from cross/re-infection among concordant positive couples[3, 4, 10, 23-25, 32].

A significant percentage of men (85.8%) and women (55.5%) were sexually active. In particular were individuals engaging in unprotected sex without desire for fertility, 71.7% and 15.2% of men and women respectively. These are at high risk for horizontal transmission of HIV infection to their partners (if negative) or to partners whose HIV status is unknown. 17.5% and 1.6% of men and women had two or more sexual partners in the three months preceding the study. Men aged 15-49 are nine times more likely than women to have had two or more sexual partners in the 12 months before the survey (9 percent and 1 percent)[1]. Men are twice as likely as women to have had intercourse in the past 12 months with a person who was neither their spouse nor who lived with them (25 percent and 13 percent) [1]. Among respondents who ever had sexual intercourse, the mean number of lifetime sexual partners is considerably higher among men (6.3) than among women (2.1)[1].

CONCLUSION

HIV positive men and women desire fertility. Their fertility intentions are comparable to those of the general population among those desiring fertility. In the CCC where HIV care is provided, treatment of both partners and their infants should be ensured. The CCC need to develop programs that educate patients on modes of maximizing safer pregnancies for their HIV positive clientele.

For the HIV positive men and women who do not desire fertility, they should be assisted to access family planning services to avoid unplanned pregnancy.

Sexual activity among HIV positive men and women with some having two or more partners, with or without desire for conception, further illustrates the positive living of these clients which is a critical component of their everyday life. Their needs have to be addressed in their HIV care and treatment and not just emphasis on HAART compliance.

There was a high unmet need for contraception in this particular group of clients. This increases the risk of unintended pregnancies.

RECOMMENDATIONS

Strategies need to be put in place that increases the uptake and use of contraceptive methods. This may include but not limited to educating the patients on the availability of FP methods, inquiring from them which FP methods they use and reasons why they choose not to use an FP method.

The pregnancy intentions of HIV positive clients need to be addressed by offering them ways they can achieve safe pregnancies by reducing the risks of horizontal transmission of HIV. They can be evaluated for the CD4, Viral load and opportunistic infections.

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Appendix I : Study limitations

- Some patients did not consent to the study
- Conflict with social desirability
- Interviewer administered in a hospital by health personnel
- High opt-out rate for questions of a sexual nature
- Recall bias of subjects

Appendix II: Ethical Considerations

- Approval was sought from the KNH/UON Ethics and Research committee at Kenyatta National Hospital
- Informed consent was obtained from all study subjects.
- Records were coded and patients'/clinicians' names were not used.
- Information collected remained confidential and was used for purposes of the study only.
- No incentives were given to study subjects.
- Participation was voluntary and at any stage the participant was free to withdraw from the study or not answer some questions without penalty.

Appendix III: INFORMED CONSENT

INTRODUCTION: I am Doctor Catherine Wangeci Mbuthia, a postgraduate student registered for masters in medicine-Mmed obstetrics and gynecology in the University of Nairobi.

PURPOSE OF THE STUDY: I am carrying out a study as part of the requirement for Mmed qualification. My objectives are to determine the fertility desires among HIV positive adults at Naivasha DH CCC.

I am requesting your participation in this study as a client at Naivasha DH CCC. I would like to bring to your attention the following ethical considerations which will guide your participation.

1. Participation in this study is purely voluntary
2. You may withdraw from the study at any time and there are no consequences for your decision to withdraw.
3. After you read the explanation, please feel free to ask any questions that will allow you to understand the nature of the study.
4. Any information you provide including details on your demographic characteristics will be treated as confidential.
5. The study protocol has been reviewed by an ethics committee. The protocol can be accessible to you should you choose to know the details.

I will be available to answer any questions that will help you to understand the nature of the study. If you wish to seek any clarification, kindly contact me on **0723922003.**

STUDY PROCEDURE: A structured questionnaire will be administered. It should take approximately 10-15 minutes to complete. The principle investigator will ask the questions. You will give consent by signing the consent forms.

BENEFITS: There are no direct personal benefits for participating in this study.

RISKS: These include embarrassment, worry, or anxiety when answering questions of a personal nature.

It is expected that study findings will help foster a better understanding of the fertility desires of HIV positive men and women at Naivasha DH CCC.

Appendix IV: CONSENT FORM

ENGLISH VERSION

University of Nairobi

Study participation consent form

Fertility desires among HIV infected adults at Naivasha District Hospital

Investigators

Catherine Wangeci Mbuthia, M.B.Ch.B., student MMed OB/GYN University of Nairobi

Emergency telephone number:

Dr. Catherine Wangeci Mbuthia, Department of Obstetrics and Gynecology, University of Nairobi, 0723-922-003

Investigators' statement

We are asking you to be in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study. Please read this form carefully. You may ask questions about what we will ask you to do, the risks, the benefits and your rights as a volunteer, or anything about the research or in this form that is not clear. When all your questions have been answered, you can decide if you want to be in this study or not. This process is called "informed consent".

Purpose and benefits

The aim of this study is determine the factors that determine the desire for fertility among HIV positive adults at Naivasha District Hospital. Through this study we want to understand the factors that inform the desire for more children, the use and non-use of contraceptives, and what determines either, the preferred methods of contraception and the sexual behaviors of HIV positive adults.

This study will benefit society by providing information that can be used to improve services to ensure more HIV positive adults are referred for Family Planning services as part of their routine care at the comprehensive care clinics and even a push toward integration of these services. This way more couples will make better informed choices as regards their family planning practices. At a personal level, participation in the study will provide an extra opportunity for adults who did not know about the variety of family planning options available to them to get information about the same. Adults identified as having an unmet family planning need will be referred to the MCH/FP for follow up and guidance. You can take part in this study if you attend the Naivasha CCC.

Procedures

This is what will happen if you decide to participate in this study. I will ask you questions about yourself, your past pregnancies, your sexual history, knowledge about your HIV status in terms of use of ART or not, CD4 count, Knowledge on Family Planning services and its use or non-

use, knowledge on your partner's HIV status, and your attitudes towards HIV/AIDS and desire for children.

After answering these questions, you will be counseled on Family planning if you are not already using it and if you decide to use these services, you will be referred to the MCH/FP program for follow up. If however you are already using these services you will be encouraged to continue the same.

Risks, stress, or discomfort

You may become embarrassed, worried, or anxious when answering some of the questions as they are of a personal nature e.g. the sexual history.

Participation in the study will require you to commit your time. Completing the questions will take 30-40 minutes. However, we will try to serve you as quickly as possible.

Other information

We will keep your identity as a research subject confidential. Only the investigator, institutional review board of University of Nairobi Ethics and Research Committee will have access to information about you. The information about you will be identified by the study number and will not be linked to your name in any records. Your name will not be used in any published reports about this study.

Although we will make every effort to keep your information confidential, no system for protecting your confidentiality can be completely secure. It is still possible that someone could find out you were in this study and could find out information about you.

You may withdraw from the study, refuse to answer any of the questions asked or to have any of the tests described above at any time without loss of benefit or penalty.

If you have any questions regarding the study you can contact the investigator listed above. You are free to refuse to participate in the study, if you decide not to participate in the study you will receive similar care to that provided to HIV positive adults participating in the study.

Signature of investigator _____Date_____

Name of Investigator_____

Subject's statement:

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later on about the research I can ask the investigator listed above. If I have questions about my rights as a research subject, I can call the University of Nairobi Ethics and research Committee at 2726300. I will receive a copy of this consent form.

Signature of subject _____Date _____

Or

Left thumbprint of subject _____Date_____

Name of Subject_____

Signature of witness (If thumbprint used) _____

Name of Witness_____

University of Nairobi Ethics and Research Committee

Hospital Road along Ngong Road

P.O. Box 20723 Code 00202

Nairobi

Telephone 2726300 Ext 44355

Email: uonknh_erc@uonbi.ac.ke

Website: www.uonbi.ac.ke/activities/KNHUoN

Secretary, KNH/UON-ERC: PROF, A.N. GUANTAI

Copies to: 1. Subject 2. Investigator's file

IDHINI YA MAKUBALIANO

KISWAHILI VERSION

CHUO KIKUU CHA NAIROBI

Mahitaji rutuba miongoni mwa watu wazima walio ambukizwa virusi vya ukimwi katika hospitali kuu wilaya ya Naivasha

MCHUNGUZI

Catherine Wangeci Mbuthia, M.B.Ch.B., mkufunzi MMed OB/GYN Chuo Kikuu cha Nairobi

Nambari ya simu:

Dr. Catherine Wangeci Mbuthia, Ofisi ya Obstetrics and Gynecology, Chuo Kikuu cha Nairobi, 0723-922-003

Mawaidha ya mchunguzi

Twakuomba uwe mmoja wa washirika katika uchunguzi huu. Kiini cha idhini hii ya makubaliano ni kukupa maneno ambayo utahitaji ili kuweza kupatiana ilani ya kwamba ungependa kuhusika na uchunguzi huu. Tafadhali yasome mawaidha haya kwa makini. Unaweza uliza maswali kuhusu mambo tutakayo kuuliza, uzuri na ubaya wowote unaohusiana nayo, na haki zako kama mwenye kujitolea, ama swala yoyote kuhusu uchunguzi huu, ama chochote katika idhini hii ambayo hauyaelewi. Maswali yako yote yakijibiwa na utosheke, unaweza amua ama utahusika nu uchunguzi huu au la. Utaratibu huu unaitwa “idhini uliyoarifiwa”.

Sababu na mazuri

Kiini cha uchunguzi huu ni kudadisi sababu za watu wanaoishi na ukimwi hapa Hospitali ya Naivasha kutaka watoto, kujenga familia. Tungependa kujua ni sababu gani ambazo sinawafanya hawa watu binafsi wahimidi kupata watoto, utumizi au kutotumia kwa jinsi kadhaa za kupanga uzazi na njia zao za kufanya ngono.

Uchunguzi huu utanufaisha jamii kwa kuwapa maelezo zaidi ambazo zinaweza tumiwa kuboresha msaada unaopewa wanao Ukimwi ili kuhakikisha wanapata misaada ya kupanga uzazi kama huduma yao ya kawaida katika CCC. Familia zitaweza kata shauri kuhusu kupanga uzazi Kibinafsi, uchunguzi huu utaweza faidisha familia abazo zingependa kupanga uzazi kupata huduma hizo na kupata mashauri mengi kuihusu. Hizi familia zitaelekezwa kwenye wanaweza kupokea huduma hizo. waweza shiriki katika uchunguzi huu ikiwa zahanati yako ni hapa Hospitali ya Naivasha.

Mtandao

Ukikubali kushiriki katika uchunguzi huu, yafuatayo ni maelezo ambayo tutakayo yatekeleza. Utaulizwa maswali ya kibinafsi kuhusu mimba za kale, shirika za ngono, kuhusu Ukimwi, madawa unayotumia, kiwango ya CD4, maarifa juu ya njia za kupanga uzazi, utumizi au utotumizi wa njia hizi, maarifa juu ya hali ya Ukimwi ya mwenzako, na maoni yako juu ya kuwa na Ukimwi na kutaka watoto.

Ukiyajibu haya maswali, utashauriwa juu ya njia za kupanga uzazi ikiwa bado huzitumii na ukiwa wazitaka, halafu utaelekezwa kwa huduma hizi. Ikiwa unazitumia njia za kupanga uzazi utashauriwa uendelee.

Madhara

Waweza ona haya ama uhisi umefadhaika unapojibu maswali ya kibinafsi kama vile kuhusu historia ya ngono.

Ushirika katika uchunguzi huu utahitaji mda wa dakika 30-40. Tutajaribu kuharakisha ili tusikupotezee wakati.

Maelezo zaidi

Utambulisho wako katika uchunguzi huu utawekwa siri. Mchunguzi tuu na watafiti wenzake wa Chuo Kikuu cha Nairobi ndio pekee watakuwa na maandishi yako.haya maandishi yatakodiwa na nambari ya siri ambayo haitalinganishwa na jina lako. Jina lako halitatumika katika maandishi ya finali.

Ingawa tutafanya chochote kinachohitajika kuyafanya maandishi yako siri, hakuna misheni ambayo haina hitilafu ndogo ndogo. Bado inaweza fanyika mtu kugundua maandishi yako na ushirika katika uchunguzi huu.

Unaweza kujitenga na uchunguzi huu, ukatae kujibu maswali unayeulizwa ama utafiti wa mwili wakati wowote bila madhara ama uzuri wowote.

Ukiwa na maswali kuhusu uchunguzi huu unaweza shirikiana na mchunguzi ambaye jina lake lapatikana kwenye idhini hili. Unaweza kataa kushiriki katika uchunguzi huu, huduma na matibabu utapokea kama ilivyo haki yako.

Mhuri wa Mchunguzi _____Tarehe_____

Jina la mchunguzi_____

Idhini ya mshirika:

Nimeelezewa juu ya chunguzi huu. Nakubali kushirikiana na wachunguzi. Nimepata fursa ya kuuliza maswali. Nikiwa na maswali zaidi nitaweza kuuliza mchunguzi mkuu. Nikiwa na maswali juu ya haki yangu katika uchunguzi huu, naweza piga simu Chuo Kikuu cha Nairobi Katiba ya Uchunguzi kwenye namba za simu 2726300. Nitapata barua langu la idhini hili.

Idhini ya muhusika _____tarehe _____

ama

idhini ya kidole cha kushoto _____Tarehe_____

Jina la muhusika_____

Idhini ya mshuhudia _____

Jina la mshuhudia_____

Chuo kikuu cha Nairobi Halmashauri ya Maadili na utafiti

Hospital Road katika Ngong Road

Sanduku la Posta 20723-00202

Nairobi

Nambari ya simu 2726300 Ext 44355

Barua Pepe: uonknh_erc@uonbi.ac.ke

Tovuti: www.uonbi.ac.ke/activities/KNHUoN

Mhazili, KNH/UON-ERC: PROF, A.N. GUANTAI

Kupitia: 1. Mshirika 2. Mchunguzi

Bomu ya Rũũtha

KIKUYU VERSION

University ya Nairobi

Bomu ya kũhoya rũtha rwa gũgũthuthuria

Wendi wa ũciari harĩ andũ agima arĩa marĩ njamuthi cia mũkingo thibitarĩ-inĩ ya Naivasha (Naivasha District Hospital)

Athuthuria

Catherine Wangeci Mbuthia, M.B.Ch.B., Mũrutwo wa MMed OB/GYN University ya Nairobi

Thimũ ya hindĩ ya kũhiũha:

Rĩgĩtarĩ Catherine Wangeci Mbuthia, rũhonge rwa ũciari na ciana rwa University ya Nairobi, 0723-922-003

Ndũmĩrĩri ya Atuĩria

Nĩ tũrakũũria ũnyite itemi ũtuĩria-inĩ ũyũ. Gĩtũmi kĩa bomu ĩno ya rũũtha nĩ gũkũhe ũhoro ũrĩa ũngĩbatara ũgĩtua itua rĩa kana nĩ ũkũnyita itemi. Nĩ ũndũ ũcio, thooma bomu ĩno na ũbaarĩrĩri. No ũrie ciũria ciĩgiĩ ũrĩa tũgũkorũo tũkũũrĩtie wĩke, mathĩna, bata waguo na kĩhooto gĩaku ta mwĩrutĩri, kana o ũndũ ũngĩ o wothe wĩgiĩ ũtwĩria ũyũ, kana ũndũ ũrĩ bomu-inĩ ĩno ũtaranyita wega. Ciũria ciaku ciothe cĩarĩkia gũcookio, no ũtue itua kana nĩ ũkwenda gũkorwo thĩinĩ wa

ũtwĩria ũyũ kana ndũkwenda. Mũtaratara ũyũ nĩguo ũĩkaine ta ‘gũtua itua ũrĩ na ũmenyo’ (informed consent).

Gĩtũmi na Ũguni

Ũthuthuria ũyũ ũtanyĩtũo kwenjera maũndũ marĩa matũmaga andũ agima arĩa matũũraga na njamuthi cia mũrimũ wa mũkingo, meirĩrie kũgĩa ciana thibitarĩ-inĩ nene ya district ya Naivasha. Kũhĩtũkĩra ũtuĩria ũyũ, nĩ tũrenda kũmenya gĩtũmi kĩrĩa gĩtwaragĩrĩra andũ aya kũgĩa ciana makĩria, ũhũthĩri kana wagi wa ũhũthĩri wa njĩra cia kũgirĩrĩria andũ kũgĩa nda, na nĩkĩ gĩcũngagĩrĩra maũndũ macio meerĩ, njĩra cia kũrigĩrĩria iria cihũthagĩrwo kaingĩ na ũrĩa andũ agima arĩa marĩ njamuthi monanaga kĩmwĩrĩ.

Ũthuthuri ũyũ nĩ ũgũteithia mũingĩ na kũũhe ũhoro ũrĩa ũngĩũhotithia kũgacĩrithia ũtungata nĩguo gũtigĩrĩra atĩ andũ aingĩ arĩa matũũraga na njamuthi ici cia mũkingo nĩ marateithĩrĩrio ũrĩa mangĩhota gũkinyĩra ũtungata wa njĩra cia kũbanga ũciari ta njĩra ĩmwe ya kũmatungata harĩ ũgima wao wa mwĩrĩ na njĩra ĩgwete na nginya kũnyitithania ũtungata ũyũ harĩ motungata marĩa maheagwo ta mũtugo.

Kũhĩtũkĩra njĩra ĩno, endwa nĩ marĩhotaga gũtua matua makinyanĩru ma ũrĩa makũbanga ũciari. Ta mũndũ kiũmbe kũnyita itemi ũthuthuria-inĩ ũyũ, nĩgũkũhe mũndũ mũgima kaanya ga kũmenya mĩtheemba ĩtiganĩte ya kũbanga ũciari ĩrĩa ĩrĩ kuo, angĩkorwo ndakũũĩ na magĩe na ũhoro makĩria wĩgiĩ njĩra icio. Andũ agima arĩa makũmenyeka atĩ matikinyagĩrwo nĩ ũtungata ũyũ wa kũbanga ũciari nĩ magũtaarĩrio kũrĩa mangĩwona, ta MCH/FP, nĩguo maheo mataaro

makĩria na ũrĩa marĩthingataga ũndũ ũcio. No ũnyite itemi ũtwĩria-inĩ ũyũ angĩkorwo nĩ ũthiaga gwa CCC Naivasha.

Mĩtaratara

Ũũ nĩguo ũtwĩria ũyũ ũgekwo kũrĩ arĩa magetĩkĩra kũnyita itemi. Nĩngakũũria ciuria cikwĩgiĩ, ũhoro wĩgĩĩ kuoha nda gwaku kwa hau gatene, ũhoro waku wĩgiĩ kuonana kĩmwĩrĩ, kwĩmenya gwaku kwĩgiĩ njamuthi cia mũkingo na ũhũthĩri wa ndawa cia kũnyihia ũrũrũ wacio iria ciũĩkaine ta ART kana akorwo ndũhũthagĩra. Ingĩ nĩ gĩthimi gĩaku kĩa ũingĩ wa njamuthi ici nĩkĩo, CD4 count, ũmenyo waku wĩgiĩ ũtungata wa mĩbango ya ũciari na kana nĩ ũhũthagĩra kana ndũhũthagĩra, ũmenyo waku wa kana mwendwa waku nĩ arĩ njamuthi ici, na ũrĩa woyagĩrĩra njamuthi cia mũkingo ũkĩringithania na ũciari wa ciana.

Thutha wa gũcokia ciũria ici, nĩ ũkũheo mataaro megiĩ kũbanga ũciari angĩkorwo ndũhũthagĩra njĩra ici, na wetĩkĩra kwambĩrĩria kũhũthĩra nĩ ũgũtũmwo kwa MCH/FP kũrĩa ũgũtaarwo makĩria ũrĩa ũrĩamũkagĩra ũtungata ũcio. No akorwo nĩ ũhũthagĩra nĩ ũkũmĩrĩrio ũthiĩ na mbere na kũhũthĩra.

Mathĩĩna na mĩtangĩko

No ũigue ũgĩtangĩka kana ona kũmaka ũgĩcookia imwe cia ciũria ici nĩ amu nĩ ikwĩgiĩ mũno ta kĩrĩra gĩaku gĩa kuonana kĩ-mwĩrĩ.

Ũgĩcookia cĩuria ici no kũbatara ũrabatara gũtũhe ihinda rĩaku. Gũcookia ciũria icio gũkuoya o ndagĩka 30 nginya 40. No ona kũrĩ o ũguo, no tũgeria kũhĩka o ũrĩa kũngĩhoteka.

Ũhoro makĩria

Ũhoro ũrĩa ũkũheana nĩ hitho iitũ nawe na kwa ũguo ndingĩũruta na nja. No mũthuthuria ũrĩa mũkwaria nake, mbondi ya University ya Nairobi ya mĩtugo mĩagĩrĩru na ũthuthuria ĩgwĩtĩkĩrio kũona riboti ĩyo nĩ ũndũ wa kũmĩrutĩra wĩra.

Ũhoro ũrĩa ũkũheana nĩ ũkũhithuo nĩ amu rĩtwa rĩaku rĩtikwandĩkwo na handũ harĩo tũkwandĩka namba. Kwa ũguo hatirĩ handũ rĩtwa rĩaku rĩkoneka ndũmĩrĩri-inĩ ĩyo kwa ũguo ndũkamenyeka nĩwe mwene ũhoro ũcio.

Ona gũtwĩka nĩ tũkageria mũno kũhithĩrĩra ũhoro ũrĩa ũgatũhe, no ũndũ ũrĩ hinya kũũhitha ũguo mũno. No kũhotekeke kũrĩ mũndũ ũkaamenya warĩ ũtwĩri-inĩ ũyũ na no ende kũmenya ũhoro waku.

Nĩ ũndũ ũcio ũrĩ na kĩhooto gĩa gũtiganĩria ũtwĩria ũyũ, ũrege gũcookia ciũria kana ona mothe marĩa matarĩirio haha thĩinĩ, ũtakũgirio kũgũnĩka na maũndũ maya kana ona kũherithio.

Angĩkorwo no ũkorwo ũrĩ na kĩũria kĩgiĩ ũthuthuria ũyũ, no ũrie mũthuthuria ũyũ wandĩkĩtwo hau igũrũ. Ũrĩ na kĩhooto gĩa kũrega kũnyita itemi ũthuthuria-inĩ ũyũ, ũngĩenda no no ũgunĩke na motungata o mothe marĩa mangĩkorwo makĩheo arĩa mangĩkorwo manyitĩte itemi.

Thaĩni ya mũthuthuria _____Mweri_____

Rĩĩtwa rĩa Mũthuthuria_____

Ndũmĩrĩri ya mũthuthurio:

Nĩ ndarĩirio ũhoro wĩgiĩ ũtwĩria ũyũ. Na nĩ nderutĩra kũnyita itemi ũtwĩria-inĩ ũyũ. Nĩhetwo mweke wa kũũria cĩũria. Ndingĩgĩa na ciũria thutha ũcio ciĩgiĩ ũtwĩria ũyũ, no njũũrie mũthuthuria ũyũ ũgwetetwo haha igũrũ. Ndingĩgia ciũria ciĩgiĩ kĩhooto gĩakwa ta mũthuthurio no hũrĩre Kamĩtĩ ya Mĩtugo Mĩagĩrĩru na Ũthuthuria ya University ya Nairobi kũhĩtũkĩra 2726300. Nĩ ngũheo bomu ya rũũtha ĩmwe ta ĩno.

Thaĩni ya mũthuthurio _____Mweri _____

kana

Kĩrore kĩa ũmotho kĩa mũthuthurio _____Mweri_____

Rĩĩtwa rĩa mũthuthurio _____

Thaĩni ya mũira (akorwo nĩ kĩrore kĩahũthĩka) _____

Rĩtwa rĩa mũira_____

Kamĩtĩ ya Mĩtugo Mĩagĩrĩru na Ũthuthuria ya University ya Nairobi

Tũrĩ Bara ya Thibitarĩ Barabara-inĩ ya Ngong

Ithandũkũ rĩa Marũa nĩ 20723 Kondi 00202

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Mwandĩki, KNH/UON-ERC: PROF, A.N. GUANTAI

Kobi kũrĩ: 1. Mũthuthurio 2. Bairo ya Mũthuthuria

Appendix V: QUESTIONNAIRE

ASSESSMENT OF PREGNANCY INTENTIONS AND CONTRACEPTIVE USE AND KNOWLEDGE AMONG WOMEN ATTENDING NAIVASHA DISRICT HOSPITAL CCC

SITE IDENTIFIERS		
Name of Facility:		
Date of Assessment(DD-MMM-YYYY):		
Assessors Name:		
Name of Interviewed Client (INITIALS/ CODE):		

Number	**Question**		**Response/Code**	
SECTION A. INTRODUCTORY INFORMATION				
QA1	Age		Unknown/ No recall	
QA2	Marital Status		Single Married Living Together Separated/Divorced Widowed	01 02 03 04 05
	A	Duration of relationship	0-1y 2-5y >5y	01 02 03
	B	If involved, do you know the status of your partner(s)?	Yes No N/A (widowed)	01 02
	C	If yes, partner is:	HIV negative HIV positive	01 02
	D	If involved, have you disclosed your status	Yes	01

Number		Question	Response/Code	
		to your partner(s)?	No	02
	E	Type of partner	Spouse	01
			Steady	02
			Casual	03
QA3	Education level		None	01
			Primary	02
			Secondary	03
			College	04
			University	05
QA4	Main Income source		Unemployed	01
			Salaried job	02
			Self-employed	03
			Casual labourer	04
			Pensioner	05
QA5	Parity		None	01
			1-2	02
			3-4	03
			>5	04
	A	Sex of preceding birth	Male	
			Female	
	B	Survival of preceding birth	Living	
			Dead	
	C	Total children still alive		
	D	Number of pregnancy losses (miscarriages)		
	E	Number of children HIV positive		
QA6	Religion		Catholic	01
			Protestant	02
			Muslim/ Hindu	03
			Others	04
QA7	Sexually active within the last 3 months?		Yes	01
			No	02
	Number of partners (last 3 mo)		0	01
			1	02
			2-4	03
			>5	04
	Frequency of coitus		Per week	
			Per month	
			Last 3 mo	

Number	Question	Response/Code	
	Duration of coital abstinence post-partum	6 weeks 7-12 weeks 6mo	01 02 03
QA8	Date of HIV positive diagnosis?		
	Feelings about diagnosis	Fear/ Horror Hopelessness Suicidal Suspicion/ denial Anger	01 02 03 04 05
	Were you pregnant at time of initial diagnosis?	Yes No	01 02
QA9	Currently on ARVs?		
	A Since when?		
QA10	CD4 count? (If available and known)	Self	01
		Partner	02
		N/A(widowed)	03
QA11	Viral load? (If available and known)	Self	01
		Partner	02
		N/A(widowed)	03
SECTION B. PREGNANCY INTENTIONS			
QB1	Do you intend to have more children?	Yes No	01 02
	A If yes, when?	Immediately Within next two years After two years	01 02 03
QB2	How many children would you like to have?		
QB3	How many children would your partner like to have?		
QB4	Have you discussed about future children with partner?	Yes No N/A (widowed)	
SECTION C. CURRENT CONTRACEPTIVE USE AND KNOWLEDGE			

Number		Question	Response/Code	
QC1		Which contraception options are currently available to you? [don't prompt]	Male Condoms Female Condoms Oral contraception/pills Injectables Implants IUCD Female sterilization Male sterilization LAM Traditional method(Rhythm,	01 02 03 04 05 06 07 08 09
QC2		Where did you learn about contraceptive methods?	Health practitioner Partner Friend/relative TV Radio Newspapers Other [ ]	01 02 03 04 05 06 07
QC3		Are you currently using contraception?	Yes No	01 02
	A	If yes, which method?	Male Condoms Female Condoms Oral contraception/pills Injectables Implants IUCD Female sterilization Male sterilization LAM Traditional method Other[ ]	01 02 03 04 05 06 07 08 09 10 11
	B	If condom, how often do you use it?	Always Sometimes Never	01 02 03
	C	If yes, where do you obtain currently used method?		

Number		Question	Response/Code	
	B	If no, why not?	Infrequent/no sex Menopause/hysterectomy Amenorrheic/ breastfeeding Currently pregnant Want more children Opposed to contraception use Partner is opposed Other close person is opposed Religious prohibition Not aware of any method Not aware of any source Dissatisfied with available options Health concerns/fear of side effects Access (distance, stockouts) Financial costs Inconvenient to use Other [ ]	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17
QC4		Have you ever started contraception and discontinued use (within 12 months of starting)?	Yes No	01 02
QC5		Do you intend to use contraception in the future?	Yes No	01 02
	A	If yes, which method?	Condoms Oral contraception/pills Injectables Implants IUCD Female sterilization Male sterilization Traditional method	01 02 03 04 05 06 07 08

Number		Question	Response/Code	
	B	If no, why not?	Infrequent/no sex Menopause/hysterectomy Want more children Opposed to contraception use Partner is opposed Other close person is opposed Religious prohibition Not aware of any method Not aware of any source Dissatisfied with available options Health concerns/fear of side effects	01 02 05 06 07 08 09 10 11 12 13 14 15
QC6		Are there contraception methods that HIV-infected women can't use?	Yes No	01 02
	A	If yes, which method(s)?		
QC7		What side effects/safety concerns do you have about contraception, if any?		
QC8		If has has BTL, why?	Desired fertility Age Fear of infection to baby Partner wish Fear of ART interaction HCW/ peer influence Medical- TAH, obstetrical	01 02 03 04 05 06 07
		Any regrets?	Yes No	01 02
SECTION D. FAMILY PLANNING AT THE CCC				
QD1		Have you ever discussed your pregnancy plans with your CCC provider?	Yes No	01 02
	a	If yes, who initiated the conversation?	Me Provider	01 02
QD2		Have you ever discussed contraception with your CCC provider?	Yes No	01 02
QD3	**a**	If yes, who initiated the conversation?	Me Provider	01 02

Number		Question	Response/Code	
	b	If yes, did you discuss it at your last visit?	Yes No	01 02
QD4		Have you ever received a contraception method at CCC?	Yes No	01 02
QD5		Have you ever been referred to receive a contraception method by CCC?	Yes No	01 02
	a	If yes, did you receive contraception from the location you were referred to?	Yes No	01 02
QD6		Would you find it useful to discuss pregnancy planning and receive contraception from CCC?	Yes No	01 02
	a	If yes, why?		
	b	If no, why not?		
QD7		Is contraception currently available at CCC?	Yes No I don't know	01 02 03
	a	If no, would you like to receive contraception from CCC?	Yes No	01 02
	b	Which methods would you like to receive from CCC?	Condoms Oral contraception/pills Injectables Implants IUCD Female sterilization Male sterilization LAM	01 02 03 04 05 06 07 08

ASSESSMENT OF PREGNANCY INTENTIONS AND CONTRACEPTIVE USE AND KNOWLEDGE AMONG MEN ATTENDING NAIVASHA DISTRICT HOSPITAL CCC

SITE IDENTIFIERS		
Name of Facility:		
Date of Assessment(DD-MMM-YYYY):		
Assessors Name:		
Name of Interviewed Client: (INITIALS/CODE)		

Number	**Question**		**Response/Code**	
SECTION A. INTRODUCTORY INFORMATION				
QA1	Age			
QA2	Marital Status		Single Married Living Together Separated/Divorced Widowed	01 02 03 04 05
	A	Duration of relationship	0-1y 2-5y >5y	01 02 03
	B	If involved, do you know the status of your partner(s)?	Yes No	01 02
	C	If yes, partner is:	HIV negative HIV positive	01 02
	D	If involved, have you disclosed your status to your partner(s)?	Yes No	01 02
	E	Type of partner	Spouse Steady Casual	01 02 03

Number	Question	Response/Code	
QA3	Educational level	None	01
		Primary	02
		Secondary	03
		College	04
		University	05
QA4	Main income source	Unemployed	01
		Salaried job	02
		Self-employed	03
		Casual labourer	04
		[illegible]	[illegible]
QA5	Religion	Catholic	01
		Protestant	02
		Muslim/ Hindu	03
		Other	04
QA6	Sexually active within the last 3 months?	Yes	01
		No	02
	Number of partners	0	01
		1	02
		2-4	03
		>4	04
	Frequency of coitus	Per week	01
		Per mo	02
		In last 3mo	03
QA7	Number of children		
	a Number of children alive		
	b Number of pregnancy losses (miscarriages)		
	c Number of children HIV positive		
QA8	Date of HIV positive diagnosis?		
	Feelings about diagnosis	Fear/ Horror	01
		Hopelessness	02
		Suicidal	03
		Suspicion/ denial	04
		Anger	05
QA9	CD4 count? (If available and known)	Self	01
		Partner	02
		N/A	03
	Viral load? (If available and known)	Self	01
		Partner	02
		N/A	03
SECTION B. PREGNANCY INTENTIONS			

Number		Question	Response/Code	
QB1		Do you intend to have more children?	Yes	01
			No	02
	a	If yes, when?	Immediately	01
			Within next two years	02
			After two years	03
QB2		How many children would you like to have?		
QB3		How many children would your partner like to have?		
QB4		Have you discussed about future children with partner?	Yes	01
			No	02
			N/A (widowed)	03
SECTION C. CURRENT CONTRACEPTIVE USE AND KNOWLEDGE				
QC1		Which contraception options are currently available to you/your partner? [don't prompt]	Male Condoms	01
			Female Condoms	02
			Oral contraception/pills	03
			Injectables	04
			Implants	05
			IUCD	06
			Female sterilization	07
			Male sterilization	08
			LAM	09
QC2		Where did you learn about contraceptive methods?	Health practitioner	01
			Partner	02
			Friend/relative	03
			TV	04
			Radio	05
			Newspapers	06
			Other [ ]	07
QC3		Are you and your partner currently using contraception?	Yes	01
			No	02
	a	If yes, were you involved in the decision of which method?	Yes	01
			No	02

Number	Question		Response/Code	
	B	If yes, which method?	Male Condoms	01
			Female Condoms	02
			Oral contraception/pills	03
			Injectables	04
			Implants	05
			IUCD	06
			Female sterilization	07
			Male sterilization	08
			Traditional method	09
			LAM	10
			Not sure if partner is using	11
			Other[ ]	12
	C	If vasectomy, why?	Desired fertility	01
			Age	02
			Fear of infection to baby	03
			Partner wish	04
			Fear of ART interaction	05
			HCW/ peer influence	06
			Medical- TAH, obstetrical	07
			Financial autonomy	08
			Other	09
	D	Any regrets?	Yes	01
			No	02
	E	If no, why not?	Infrequent/no sex	01
			Partner hysterectomy/menopaue	02
			Partner is breastfeeding	03
			Partner is currently pregnant	04
			Want more children	05
			Opposed to contraception use	06
			Partner is opposed	07
			Other close person is opposed	08
			Religious prohibition	09
			Not aware of any method	10
			Not aware of any source	11
			Dissatisfied with available	12
			options	13

Number		Question	Response/Code	
			Access (distance, stockouts)	14
			Financial costs	15
			Inconvenient to use	16
			I don't know	17
			Other [	
QC4	Do you and your partner intend to use contraception in the future?		Yes	01
			No	02
	a	If yes, which method?	Condoms	01
			Oral contraception/pills	02
			Injectables	03
			Implants	04
			IUCD	05
			Female sterilization	06
			Male sterilization	07
			LAM	08
			[illegible]	
	b	If no, why not?	Infrequent/no sex	01
			Partner hysterectomy/menopaue	02
			Partner is breastfeeding	03
			Partner is currently pregnant	04
			Want more children	05
			Opposed to contraception use	06
			Partner is opposed	07
			Other close person is opposed	08
			Religious prohibition	09
			Not aware of any method	10
			Not aware of any source	11
			Dissatisfied with available	12
			options	13
			Access (distance, stockouts)	14
			Financial costs	15

Number	Question		Response/Code	
QC5	Are there contraception methods that HIV-infected women can't use?		Yes No Not Sure	01 02 03
	a	If yes, which method(s)?		
QC6	What side effects/safety concerns do you have about contraception, if any?			
SECTION D. FAMILY PLANNING AT THE CCC				
QD1	Have you ever discussed family planning with your CCC provider?		Yes No	01 02
	A	If yes, who initiated the conversation?	Me Provider	01 02
	b	If yes, did you discuss it at your last visit?	Yes No	01 02
QD2	Would you find it useful to discuss family planning from CCC?		Yes No	01 02
	a	If yes, why?		
	b	If no, why not?		

Appendix VI Dummy tables

Table 1: Patient characteristics

Age(yrs.)	HIV positive Men	HIV positive women	
18-24			
25-30			
31-35			
36-40			
>40			

Marital status			
Married			
Single			
Widowed			
Cohabiting			
Divorced/ separated			
Level of education			
Not educated			
Primary			
Secondary			
College			
University			
Employment			
Unemployed			
Self employed			
Salaried employment			

Casual laborer			
Religion			
Catholic			
Protestant			
Muslim Hindu			
Others			
Informed spouse on HIV test			
Yes			
No			
N/A e.g. widowed			
Knowledge of spouse's HIV status			
Yes			
No			
N/A e.g. widowed			

Appendix VII Budget

Budget and its justification

As funding for this proposal is jointly allocated, there shall be a clear sructure of funds administration that will ensure transparency, accountability and value for money for all activities propossed for the project. I in collaboration with my collegues will open a joint account with one of Kenya's financial banks and put in place mechanisms of funds withdrawal. To safeguard against fraud, three signatures from three of the team members (one from phamacy, one from Nursing and One from Public health) will be required before any withdrawal can be effected. Any activity expenditure will have to be backed by support documents such as actual activity reports, transport tickets, participant lists, conference receipts, purchase receipts and calling cards evidenced by purchase receipts. Payment to support staff (research assistants) will be backed up by payment vouchers. This is to ensure that all money spent will be accounted for to the very last cent.

Finacial reporting will be done on a monthly basis to ensure that money is being spent on the relevant line items.

Project budget justification

This budget is drawn to facilitate the implementation of the research for the evaluation of the fertility desires of HIV infected mothers at Naivasha district hospital. This project is estimated to cost 1 million Kenya shillings.

The budget is segmented into two phases; a) preparatory phase covering all preparatory activities before the actual contracting of the grant and b) implementation phase covering the period of actual implementation.

The preparatory phase to cost 400,000 Kenya shillings will cover costs for printing and photocopy of support documents (CV's, Personal statements, etc.) to be submitted together with the application. The preparatory budget will also cover transport and communication costs for Principal investigators during the drawing of the proposal. This is critical to ensure that all principal investigators are able to participate effectively and to ensure prompt communication during this period.

The implementation phase with an estimated cost of 600,000 Kenya shillings is intended to cover expenses to be incurred during preliminary visits to the study site, recruitment and training of research assistants, data collection, and supervision during data collection by principal investigators, data entry and management, data cleaning and processing, report writing and dissemination of final report. Implantation phase costs will go directly to facilitate procurement of goods and services that are necessary to ensure accurate, timely and quality relevant data is collected.

Activity	Quantity	Unit cost	Total cost	Justification
Proposal development	50 pages Stationery Photocopy of 100 pages @2/= per page	Printing @10/= per page 500/= 200	1,200	Purchase of stationery, printing expenses and photocopying expenses

Research tools	200 questionnaires	100/=	20,000	Photocopying, printing
Familiarization tour of Naivasha	11 persons Hire of vehicle	5,000 per person 40,000	55,000 40,000	Accommodation, meals, transport
Recruitment and training of research assistants	20 persons	10,000/= per person	200,000	Hall hire, stationery, Allowances, Meals, Accommodation, Printing
Testing of research tools	10 persons	10,000/=per person	100,000	Fuel, driver, photocopying, Accommodation, Printing
Data collection	20 persons	15,000/=per person	300,000	Fuel, Accommodation, Driver, Photocopying, Printing, Allowances
Data analysis	1 statistician	80,000/=	80,000	Wages
Printing of analyzed data		20,000/=	20,000	
Feedback to Naivasha team	100 persons	1000/= per person	100,000	Hall hire, snacks, Teas, stationery, Accommodation
Presentation and submission to University of Nairobi	100 participants	1000/=@	100,000	Teas, snacks, Stationery
Contingencies (to nearest 10%)			100,000	
Totals			Kes.1,106,200	