IIIV COUNSELLING AND TESTING IN ANTENATAL CARE SETUP IN AN URBAN SLUM SETTING (NAIROBI, KENYA)

Factors Influencing Acccptancc of HIV Counselling and Testing Among Women Attending Antenatal Care Clinic

A Thesis submitted to the Faculty of Medicine, Department of Community Health, University of Nairobi in partial fulfilment of the requirement for the degree of Masters of Public Health (MPH) 2006

By

Marjory N. Wsjweru

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university or any other award.

Signed:_____ Date \ \ \ **I O \ T O P G**

Marjory N. Wawcru, MBCliB

SUPERVISORS' APPROVAL

INTERNAL SUPERVISORS:

Prof Elizabeth N. Ngugi, BSc, MA, PhD

Senior lecturer, Department of Community Health

University of Nairobi

Signed, r S **Date** **fl/lolfllfc£**

Mr. Erastus K. Njeru, BSc, MSc

Lecturer, Department of Community Health,

University of Nairobi^

Signed **Date** *J)Q 1*2.006*

EXTERNAL SUPERVISOR:

Dr. James Kiarie; MBChB, M.Mcd. MPH

Honorary Lecturer Department of Obstetrics and Gynaecology, I ON

Si B ncd _____ h^ **Date** *41 Ob*

CHAIRMAN, DEPARTMENT OF COMMUNITY HEALTH:

Professor A.M. MwanH»r4tMt,JUSEILPh.D.

DEPARTMENT OF 1

Sitzned **HEALT^aX / ^ J I** *f v t*

UNIVERSITY OF NAIROBI

P- 0. 8ox 19676

Tel: 2724639

NAIROBI

DEDICATION

This work is dedicated lo my husband Boniface Waweru and my children Gabriel, Jeremy and Immanuel for being with me during this long journey.

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AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care clinic
AUT	Anonymous unlinked testing
ARVs	Antiretrovirals
CTCS	Counselling testing care and support
FP	Family Planning
FGDs	Focus Group Discussions
CoK	Government of Kenya
HIV	Human Immune Deficiency Virus
IMR	Infant Mortality Rate
KDIIS	Kenya Demographic Health Survey
Moll	Ministry of I Iealth
MTCT	Mother-to-Child Transmission of HIV
NASCOP	National AIDS and STDs Control Programme
NARKSA	Network of AIDS Researchers of Eastern and Southern Africa
PLWIIA	People living with IIIV/AIDs
l'M rc r	Prevention of Mother to Child Transmission
RPR	Rapid Plasma Reagin
sris	Sexually Transmitted Infections
UN	United Nations
UN AIDS	United Nations Program on IIIV/AIDS
USAII)	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

SUMMARY

Worldwide i(is estimated that three million children under the age of fifteen years have been infected by IIIV and more are infected everyday. Mother-to-child transmission of IIIV accounts for 90% of these infections. Reported rates of HIV transmission from mother-lo-child range from 15% to 25% in Europe and U.S.A. and from 25% to 40% in some African and Asian studies.

In order to prevent mother-to-child transmission a threefold strategy is needed. It requires that women are protected against infections and that unwanted pregnancies are avoided among HIV infected women and women at risk. It also entails preventing transmission of the virus from IIIV infccted women to their infants during pregnancy, labour and delivery, as well as during breastfeeding.

The primary strategy to prevent perinatal HIV transmission is to maximize prenatal IIIV testing of pregnant women. The main drawback however is that only those who give consent to be tested are offered the test after pre-tcst counselling. This study was done in a setting of high prevalence of IIIV among women of childhcaring age and demand for treatment to prevent mother-lo-child transmission.

This study aimed to assess factors that influence acceptance of HIV Counselling and testing among women attending antenatal care clinic through a descriptive cross-sectional study that was carried out between April and May 2005. Pregnant women who were attending antenatal care in Matharc North City Council Clinic

were recruited into the study. Quantitative data was collectcd using a pie-tested standardized questionnaire and qualitative data by focus group discussions.

Among the 509 women interviewed 78% accepted voluntary counselling and testing. The mean age of respondents was 24 years with a range of 18 to 43 years. Among the respondents 65% had less than primary education and 80% were in monogamous relationships. Mighty percent were married traditionally, 68% were housewives and 92% lived in single rooms. The mean duration of marriage was 4 years with a range of 0.1-23 years. Ninety three percent reported adequate support from partner and 21% reported of having ever been assaulted by the partner.

Although 99% of respondents had a good knowledge of transmission of HIV from mother-to-child, knowledge of specific aspects of prevention was lower. Only 55% of the respondents knew that exclusive breastfeeding ca? be an option for PMTC I •

Most respondents felt that voluntary counselling and testing should be offered to ;ill pregnant women in the antenatal clinic. Test acceptance was influenced by education status of the respondents with those who had greater than primary education being more likely to accept HIV testing compared to those who had education less than primary (p=0.009), prior 1IIV testing (y;=0.02), knowledge that IIIV transmission can occur through breastfeeding (/;=0.02) and women who knew that VCT was being offered in the clinic through a relative and a health worker

(p 0.003) and (/; 0.009) respectively. I lie study showed that older women with older partners were more likely to accept HIV testing (y;=0.03) and (y) =0.02) respectively.

Highly two percent of women said they accepted to take an IIIV test because they wanted to know their status. Only 21% said they took the test for the sake of the baby.

Among respondents who declined IIIV testing 73% still felt that IIIV testing should be offered to everybody. The commonest reason respondents gave for declining IIIV testing was that they wanted to tell/ask their partners first and 10% said that they would have preferred to take the test together with their partner/husband while 8% said that they were not ready to take the test on that particular day.

Sixty nine percent said that their refusal of IIIV testing was not inllueneed by the counsellor and 63 % said it was not inllueneed by perception that they were not at risk. The main issue of concern in women who declined IIIV testing was that they were seared that they would be blamed for having brought the disease to their partners. Respondents who reported that they had not contracted a sexually transmitted infection especially syphilis were less likely to accept IIIV testing (p=0.02). The partner/husband was mentioned as the main impediment to acceptance of VCT in antenatal clinic. Male involvement is crucial if I'M I CT

interventions programmes arc to be successful and therefore programmes should be devised that promote antenatal voluntary counselling and testing for couples as this might increase on uptake of PMTCT interventions and provision of treatment, care and support to IIIV positive pregnant women.

l-fforts should be geared towards ensuring that all women of child bearing age have access to IIIV counselling and testing facilities and to achieve this other health provision personnel like community health workers who in most instances also double as traditional birth attendants should be trained on VCT and administration of Ncvirapine. Another aspect that needs to be addressed is on methods of providing PM TCT information. This might need to be re evaluated so that those with less than primary education should be identified and simple education methods by using pictures be devised so as to ensure that they understand the importance of PMTCT and other health related issues.

Modalities to cope with stigma and discrimination need to be addressed as this might be the main reason for reduced uptake of VCT since this might translate to hindrance of acccss to care and treatment for IIIV positive mothers and their children now that ARVs are available and pregn>%t women require earlier commencement of ARV treatment.

CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND

The IIIV/AIDS pandemic is one of the greatest challenges that the world has ever seen. Within a single generation it has grown into an individual and societal tragedy with huge implications lor human security, for social and political stability and for economic development[1]. For over 20 years now HIV and AIDS have presented historic challenges to global public health, scientific and medical communities. Many more people are affected in one way or another because of their parents and other family members, friends and co-workers who have died from AIDS or are infected with IIIV[1].

As at the end of 2002, an estimated 42 million people worldwide - 38.6 million adults and 3.2 million children younger than 15 years were living with HIV/AIDS. Approximately 70 percent of these people (29.4 million) live in Sub-Saharan Africa; another 17 percent (7.2 million) live in Asia[2]. In Africa the South African region is currently experiencing the worst IIIV epidemic in the world. It is estimated that 12% of the adult population of Southern African Development Community (SADC) countries is infected with a great variation from 0.08% in Mauritius to 25.84% in Zimbabwe[3].

One of the reasons why sub-Saharan Africa has the world's most severe IIIV/AIDS epidemic is because of the high prevalence of other Sexually Transmitted Infections

(S I Is) in the region and the inadequacy of STI services. The presence of an S IT increases the risk of II1V transmission during unprotected sex as much as tenfold. Out of the estimated 330 million new curable STIs worldwide 65 million occur in sub-Saharan Africa. The World Health Organisation (WHO) estimates that Africa has the highest regional prevalence of the four major triable STIs that is syphilis, gonorrhoea, chlamydial infection and trichomoniasis[3]. HIV is mainly transmitted in three ways: through unprotected sexual intercourse which can be heterosexual or homosexual, through blood or blood products, donated semen or organs or from an infected mother to her child vertical or Mother to Child Transmission (MTCT). More than 70% of infections arc as a result of heterosexual transmission and over 90% of infections in children result from MTCT[1].

The first AIDS case in Kenya was observed in the mid 1980's; and by 1995, 63.179 cases had been reported. Presently it is estimated that approximately 2.2 million people are currently living with HIV in Kenya with a prevalence ranging from 11% to 29% in the urban areas, while in rural sentinel surveillance sites, the prevalence ranges from 2% to 31%. Most of these people do not know that they arc infected and have no outward signs and symptoms of the disease. So far about 1.5 million people have died from AIDS and about 200,000 Kenyans develop AIDS each year[5].

The consequence of the IIIV infection is that people will fall ill and die. The impact is most prominently seen in terms of decreased life expectancy, increased orphaning and higher rates of infant and child mortality. Although children born to

infccted women have only about a 30% chance of being infected, they have virtually a 100% chance of being orphaned and it is estimated that by 1998 there were approximately 2, 214, 000 AIDS orphans in Africa[3].

In 1999 the President of Kenya declared AIDS a national disaster. Subsequently the government mobilized additional resources and established a National AIDS Control Council to advocate, strengthen and coordinate the multisectoral response to contain the spread of IIIV and mitigate the impact of AIDS[7].

The declaration of commitment on IIIV/AIDS adopted by the United Nations General Assembly Special Session on AIDS (IJNGASS) in June 2001 commits member countries and the global community to taking strong and immediate action to address the IIIV/AIDS crisis. It calls for expanded programs at the national and global level and its coverage targets education and services for youth and PMTCT of 111V[1]. The Kenya Government Sessional Paper Number 4 of 1997 on AIDS in Kenya notes that infection of the mother is the main factor influencing the transmission of IIIV from the mother to the child and has listed interventions that are necessary to curb it. This has been done through the Ministry of I Iealth (Mol I)) and evidence based guidelines arc already in place [8].

1.1 Motlier-to-chilil Transmission (MTCT)

Worldwide it is estimated that three million children under the age of fifteen years have been infected with IIIV[9]. Another 1.1 million children are currently infected

and 1600 more are infccled everyday[10]. Mother-to-child transmission accounts for 90% of these infections whereby reported rates of transmission of HIV from mother to child range from 15% to 25% in Europe and the U.S.A. to 25% to 40% in some African and Asian studies. All the infants who acquire IIIV infection through MTCT do so during pregnancy, labour and delivery or after birth through breastfeeding. The risk of infection is thought to be 5-10% during pregnancy, 10-20% during labour and delivery and 10-20% during breastfeeding.[9]

The MTCT problem in Sub Saharan Africa is especially severe because HIV is prevalent in the region and women of reproductive age have a comparatively high rate of IIIV infection. The total population of women of reproductive age is large, birth rates are high, and effective PMTCT prevention interventions are lacking'.

AIDS related deaths are reversing gains in child health and survival, forecasts for Zimbabwe in 2010 for example, show that AIDS is expected to push the infant mortality rate lo 138% higher and the under five-mortality rate to 30%, 4% higher than they would have been in the absence of AIDS and in Cote D'lvoire child mortality will rise by over two-thirds (IJNA1DS 1999).

ESTIMATED MAGNITUDE OF MTCT IN KENYA

Population	**28.7 million**
liirtli per siii 11 ii**in**	**1.2 million**
Sero-positive prevalence in women	20%
Total number of births to scro-positive mothers annually	**240,000**
Number of HIV positi\e infants per annum in Kenya assuming 40% transmission	**96,000**

Sourcc: Ministry of Health ('linical Guidelines 200 V

1.2 Prevention of Motlicr-to-cliild Transmission of HIV

The prevention of mother to child transmission (PMTCT) refers to services that counsel pregnant women about HIV offer an IIIV test and provide prevention services to those who arc IIIV positive. Prevention services should ideally include treatment with Zidovudine (AZT), Nevirapine or other antirctroviral drugs and may also include breastfeeding counselling and supplemental feeding[1]. T his is however determined by the availability and acceptance of voluntary and confidential HIV counselling and testing services[12].

In Kenya, caring for IIIV infected children carries heavy costs for families and health systems. Reduction of MTCT of IIIV infection increases child survival, decreases load on health system, decreases number of TIIV infected orphans and gives opportunity to improve and expand health services as well as strengthen health infrastructure .

In order to prevent MTC'T a three-fold strategy is needed. It requires that women are protected against infections, and that unwanted pregnancies be avoided among HIV-infected women and women at risk. It also entails preventing transmission of the virus from HIV-infected women to their infants ddiing pregnancy, labour and delivery, as well as during breastfeeding[13].

Pregnant women who arc HIV-positive can halve the chances of passing HIV on to their babies by taking antiretroviral drugs. Treatment options available include a one-month course of zidovudine (AZT) during the last months of pregnancy, or a single dose of nevirapine at the onset of labour, followed by a single dose to the infant within 72 hours of birth. Obstetrical procedures such as cacsarean section may also reduce transmission but is often not feasible in many developing countries .

Mother-to-child transmissions in the developed world has virtually been eliminated due to effective voluntary counselling and testing, access to combination antiretroviral therapy or use of long-term regimens of MTCT prevention, safe delivery practices (including elective cacsarean sections), and the widespread availability of breast-milk substitutes[13].

In urban Uganda there has been a reported decrease in the prevalence of IIIV infections in pregnant women over the past few years. The 20% drop in prevalence is thought to be due to behaviour change following aggressive (AIDS) education campaigns[15].

1.3 Counselling and Testing for HIV in Antenatal Clinic

Counselling and testing in antenatal clinic is different from Voluntary Counselling and Testing. In VC'T centre, the client seeks the service for the sole purpose of learning about their 1llV serostatus and receiving counselling regarding their results as well as other information about 1IIV infection and AIDS. ANC on the other hand is for pregnant women who mainly seek medical care for the well being of the unborn babies as well as that of their own [8]. IIIV counselling and testing is usually a secondary purpose and is normally recommended to her by the health worker . The primary strategy to prevent perinatal IIIV transmission is to maximize prenatal HIV testing in pregnant women.

Prior to 1994 interventions to reduce perinatal IIIV transmission were limited to the prevention of IIIV transmission in women of childbearing age, the deferral of pregnancy by HIV-positive women, and the termination of pregnancies by HIV-positive women. But, in 1994 researchers at the US National Institutes of Health and its collaborators demonstrated through research that zidovudine administered to HIV-positive pregnant women and their infants reduced perinatal HIV transmission by two-thirds from 25.5 per cent to 8.3 per cent[16]. Subsequent results have achieved even lower rates of perinatal IIIV transmission and have stimulated debate within the international medical communities and public health circles on how to best offer HIV testing to pregnant women. In so doing, antirctroviral chemo prophylaxis reduces the risk of perinatal IIIV transmission and thus more women should be made aware of its availability, benefits, and unknowns This has

resulted in a changed the approach of offering 11IV testing; from targeted approach of offering 111V testing to those women who were at risk of HIV transmission, to the provision of information about the risk of perinatal transmission and the availability of testing to all pregnant women"'. However, in settings where HIV counselling and testing services are available, the social stigma associated with HIV infection inhibits many women from using such services to learn their HIV infection status and therefore from taking steps to prevent transmission[12].

1.4 Voluntary Counselling and Testing

Voluntary counselling and testing is the anonymous and confidential testing for HIV initiated by the client, the health worker, or provider. VCT programs have demonstrated their ability to increase safe sexual behaviour and use of care and support services among adults by helping clients learn their HIV serostatus and creating a personalized IIIV risk reduction plan[17]. VCT can also provide the information and support necessary to change risky behaviour that could lead to IIIV infection or transmission[16].

Voluntary counselling and testing targets behaviour change. Knowledge of a HIV person's status empowers them to make informed decisions about their sexual lifestyle that would otherwise predispose individuals to HIV infection. In Kenya, for over ten years now HIV/AIDS counselling, testing, care and support (CTCS)

services have been developed and delivered by dedicated non-governmental organizations (NGOs), governmental and private agencies[8].

VCT is an essential service for both prevention and treatment. People who test positive for HIV infection can immediately seek appropriate information, support and treatment. VCT is therefore, an essential entry point for better care and prevention of mother to child transmission of HIV. Studies have shown that many people who undergo VCT change their sexual behaviour to protect themselves or their partners[17]. I ligli utilization rates of VCT usually indicate low levels of stigma and discrimination since people who are afraid of the negative social consequences of a positive IIIV test will often avoid VCT

1.5 IIIV and Infant Feeding

HIV was first detected in breast milk in the mid 1980s and created problems as to how to advise IIIV infected mothers on the feeding of their infants[9]. The risk of transmitting HIV though must be balanced against the risks that can result from failure to breastfeed. Exclusive breastfeeding is the best way to feed a newborn because it provides appropriate nutrition, passively conveys protection against some micro organisms including respiratory and gastrointestinal pathogens, and is more economical. It also delays the return of fertility playing an important role in birth spacing[19].

However there is continued concern that up to 15% of infants born to HIV infected mothers may acquire IIIV through breast feeding, depending on duration and other risk factors. If a mother is infected with IIIV it may be preferable to replaee breast milk to reduce the risk of IIIV transmission to her infant.

Replacement feeding is the only way to completely avoid postnatal HIV transmission. However it carries an increased risk of morbidity and mortality associated with malnutrition and other infections and it is therefore only recommended in instances where it is acceptable, affordable, feasible, sustainable and safe[9].

For a IIIV positive mother, the decision as to whether to break the tradition and not breastfeed or to run the risks of transmitting the virus through breastfeeding imposes a heavy burden. There could be many adverse social consequences to a woman who does not breastfeed. For instance, she may be stigmatized and others may suspect that she is IIIV positive. Such a woman may therefore to try to disguise her HIV status by breastfeeding while at the same time applying artificial feeding in an attempt to reduce the risks to the baby. This however exposes her baby to both sets of risks .

The stigma of HIV/AIDS therefore has a negative impact on acceptance of MTCT prevention and thus determination of the cultural relevance of breast-feeding is critical to providing sound breastfeeding advice to women with limited range of

viable choices' This is in contrast to the developed world where there is an almost universal availability of clean water, government programs to subsidize the purchase of formula for women living in poverty, and cultural acceptability of formula feeding. All these factors have contributed towards allowing HIV-infected women to avoid breasflCeding, thereby preventing postnatal transmission of HIV[12].

This research therefore seeks to address the following questions;

a) Are the women who decline voluntary counselling and testing different from those who accept?
b) What are the correlates for refusal? and
c) What are the correlates for accepting IIIV testing?

CHAPTER TWO

2.0 LITERATURE REVIEW

One of llie pillars believed lo be essential in the battle against the HIV/AIDS pandemic is the prevention of mother-to-child transmission. Pregnant women have been the targets of many seroprevalence studies as they provide an accessible cohort for IIIV testing and a stable sampling frame. Although valuable information has been obtained on trends in the epidemic, the practice of testing in pregnancy has been criticized in the past because it has been seen as one which stigmatizes women and which has not led to implementations of appropriate health care.

Recent discussion about, and recommendations for mandatory testing of pregnant women or newborns have raised concerns about the autonomy and rights of a woman[21]. Women's access to IIIV testing is adversely affected, first of all. by perceptions that they are not at risk and that only homosexuals, drug users and commercial sex workers are at risk of IIIV infection[22]. Majority of women cannot access public education because they are "protected" in their homes and think they are in monogamous relationships. Other barriers to accenting testing lies in the fact that women often live in situations of abuse and economic dependence and are often fearful of the potential consequences of IIIV testing.

Indeed, women testing IIIV positive may experience additional negative consequences that most men testing positive do not have to deal with. For example.

one study showed that 52% of women who tested positive feared that their partners would leave them once they notified them of the test results; and 12% expected to be assaulted. Half of them were indeed subjected to violent acts by their partners[23].

A study done in Kigali Rwanda aimed at investigating factors related to acceptability of voluntary counselling and testing for HIV among pregnant women presented in labour in an era office and effective antiretroviral drugs for prevention of perinatal transmission of IIIV, revealed that the strongest predictivity factor for acceptability of IIIV testing was the profession of the male partner. Women whose partners had skilled and well paid jobs were about four times more likely to accept HIV testing than women whose partners were unemployed.

The other factor significantly associated with acceptance rate was maternal age. The likely hood of acceptance of IIIV was about three times higher among 35ycars or older than among younger mothers''. National surveys in Kenya, Tanzania and Zimbabwe have shown that while around 60 per cent of adults want to know their HIV status, only per cent or less have had access to VCT. Carefully designed radio, television and print advertising have increased awareness and use of VCT services. In Zimbabwe, USAID-supportcd social marketing of VCT has resulted in four-fold increase in client visits to several VCT centres launched by the government since 1998. Similarly, eye-catching billboards in Kenya pose different "hook" questions and invite readers to discuss the questions at "a VCT centre near you" \

lb maximize prcnalal I1IV testing of pregnant women medical record data was used to determine the effectiveness of three different approaches: opt-in, opt-out and mandatory testing. Under the opt-in approach, women were provided with pre-111V test counselling and an option to consent specifically to an HIV-antibody test. Under the opt-out approach, women were notified that an 111V test would be included in a standard battery of prenatal tests and procedures and that they could refuse testing. Mandatory testing where by newborns were tested for HIV. with or without the mother's consent, if the mother's IIIV status was unknown at delivery.

The data obtained suggested that "opt-in" voluntary testing approach was associated with lower testing rales than either the "opt-out" voluntary testing approach or the mandatory newborn 111V testing approach. (\ Another study aimed at evaluating the benefits and risks of mandatory compared with voluntary IIIV testing of pregnant women to help guide research and policy revealed that at high levels of acceptance of voluntary testing, the benefits of a policy ol mandatory testing are minimal and may create the potential harms of avoiding prenatal care to avoid mandatory testing [27].

There are however a number of potential benefits to women of voluntary counselling and IIIV testing prior to or during pregnancy. These benefits include:

- Where a woman is found to be infected, this knowledge can facilitate early counselling and treatment
- A diagnosis in the mother allows appropriate treatment and follow-up of her child.

- Knowledge of her II1V status enables the woman to take decisions on continuation of pregnancy and on future fertility.
- Testing allows an opportunity to implement strategies to attempt to prevent transmission to the child.
- Knowledge of IIIV status enables the woman to take precautions to help prevent transmission to sexual partners
- Women diagnosed as IIIV positive can tell their sexual partners and enable partners to be counselled and tested
- If the test is negative, women can be guided in appropriate IIIV prevention measures and risk reduction behaviour[1]

In spite of above outlined benefits barriers to universal prenatal IIIV testing still exist. One of the studies carried out in the United States, to identify these barriers revealed that the likelihood of a woman being pre-natally tested for IIIV depended on her medical insurance, her perception of her physician's lecommendation and the location of the hospital. Only 89.9% of women reported that they were offered testing while 69.9% accepted to be tested.

Women who believed that their physician did not recommend testing were less than half as likely to be tested compared to women who perceived a strong testing recommendation from their physician. Women with private insurance were also less likely to be tested than women with other health care insurances. The most common reasons women gave for declining the test were: not being at risk 55.3%.

having been tested recently 39.1% and not being offered or recommended the test 1 1.1 %[2X].

Another study that tried to elicit HIV testing motivators, barriers and preferences for new strategies established that barriers to testing include factors influenced by individual concern i.e. fear and discrimination; by programs policies and laws, named reporting and inability to afford treatment. Therefore strategies for improving acceptance of HIV counselling and testing should include information about access to anonymous testing and early treatment.

Other concerns that people raised included expanding options for rapid testing i.e. urine testing, home sell' testing, and allowing telephone results disclosure may encourage mother persons to learn their IIIV status [29]. This study compares well with another one that was done in South Africa to evaluate IIIV-VCT services for mincworkcrs where both client and counsellor identified fear of a positive result as a major barrier to IIIV testing. Clients in this study also raised the issue of confidentiality.

HIV testing in pregnancy can also be coupled with disadvantages. These vary from community to community but some reports have reported an increase in the risk of violence against women, the possibility that the woman may be stigmatized within her community and by health workers, high levels of anxiety and psychological scqueale[4].

A study carried out at Muhimbili University College of Health sciences to explore the intersections between HIV and violence among women at a VCT clinic in Dar-es-Salaam. Tanzania revealed that women experienced more barriers to HIV testing than men did. It was also revealed that men's decisions to test for HIV were made on their own without soliciting the consent of their partners. On the other hand, women's fear of their partners' reaction was the major barrier to IIIV testing. Rate of disclosure was higher in HIV negative results as compared to HIV positive results, 82% vs. 69%. Rate of disclosure among HIV positive persons was however noted to increase over from 27% in 1995 to 64% in 1999.

Factors that were attributed to this rise were increased awareness and acceptability of 111V testing in the community. Physical abuse was reported by both HIV positive and HIV negative adults when other demographic variables were controlled but, IIIV positive women were more likely to report physical violence than HIV negative women™ (Maman el al AIDS care 2001 and AIDS Oct. 2000 WHO). This finding was also documented in the study done to measure the efficacy of VCT in free standing VCT clinics in Nairobi, Dar- es- Salaam and Port-of-Spain".

For effective uptake of interventions to reduce mother to child transmission of IIIV. partner involvement is very important because it facilitates acceptance of payment for any treatment that may be required and enables proper care of the child. This is especially important in replacement feeds for the baby because it involves buying of milk. Partner notification has however been found to be low. A study done in Mombasa on consequences of informing partners about HIV scropositivity in an

African selling showed that two-thirds of women did not inform their partner for fear of his reaction. In those who did inform them, there was a 73.3% understanding and support from the partner, 3.5% chased away wife and 3.3% exhibited violence against their wives. Eighty three percent of women thought that knowing of IIIV seroslatus was useful. Out of those who thought that knowledge of HIV serostatus was not useful 68.6% said they were more worried about being sick and dying because AIDS has no cure, and 35.3% were scared of their partner. To avoid violence IIIV voluntary counselling and testing of couples should therefore be encouraged[32].

A study done in an antenatal clinic Metropolitan London aimed at identifying factors that contribute to women declining antenatal IIIV testing during pregnancy established that of the 560 women who were offered IIIV test 124(24%)acccpted the test and that 436 (77%) declined to have test. The main reasons they gave were that lliey had not been at low risk of IIIV infection however it was found that they based their belief on patchy IIIV Knowledge

The cost effectiveness of providing VCT was assessed in a study carried out in Kenya and Tanzania estimated that for every 10,000 men and women obtaining personalized services, 1,104 infections would be prevented in Kenya and 895 would be averted in Tanzania the following year. Costs per infection averted would total US$249 and $346, respectively, flic costs of treating an infected individual, not to mention the noil economic costs in suffering and social impact on families and communities, would likely be substantially higher '

CHAPTER THREE

3.0 PROBLEM STATEMENT AND RESEARCH QUESTIONS

3.1 Statement of the Problem

One of the major breakthroughs in controlling the spread of HIV has been in reducing the risk of mother to-child transmissions. Voluntary counselling and testing is not only a key component of both HIV prevention and care programmes but is the entry point to both prevention and care. In order for one to respond to options for each it is preferable that there are aware of their serostatus.[3]

In Africa, four million children have died of AIDS since the epidemic began whilst one million children are currently living with HIV. In the year 2000, 10% of new infections reported were in children 90% of which were through mother-to-child transmission cither during pregnancy, birth or when breastfeeding[35].

For many years little was known about preventing transmission of HIV infection from mother to child. Recently however, many advances have been made in developing effective and affordable interventions that reduce the likelihood that a woman will pass IIIV on to her baby. The two most important interventions for prevention are provision of antiretrovirals and the avoidance of breastfeeding in HIV positive mothers[4]. Both therefore require that a woman knows of her HIV serostatus.

Since HIV testing is not a mandatory test for all pregnant women some women accept testing while others decline. Studies done have shown that women at a higher risk of IIIV infection are the once that decline HIV testing thus making the overall impact of interventions to prevent mother-to-child transmission of IIIV less effective.

3.2 Study Justification

Mother-to-child transmission of HIV (MTCT) is now recognized as the second leading cause of new HIV infection after sexual transmission worldwide. A lot of effort is being directed at prevention of mother-to-child transmission. The main entry point for this is antenatal clinics where pregnant women are encouraged to go for voluntary counselling and testing. Studies done have shown that not all women given information on (MTCT) and (PMTCT) accept to take the test. This study will be done against the background of a high prevalence of Human Immunodeficiency Virus among women of childbearing age and with increased demand for treatment to prevent mothcr-to-child transmission.

This study is aimed at providing information on the concerns of women who decline IIIV testing in ANC and their IIIV prevalence. Many studies that have been carried out have evaluated altitudes to IIIV testing, perceptions of risk in those who accept counselling and testing of HIV, partner notification, acceptability of voluntary HIV counselling and testing by pregnant women but no study has been done so far to compare those who accept counselling and testing of HIV versus

those who decline. The information gathered from this study will help policy makers to form a basis for designing strategies to give information and education 011 MTCT and PMTCT with an aim of increasing testing levels in antenatal clinics for effective uptake of PMTCT interventions.

3.3 Broad Objective

To determine factors that influence acceptability of voluntary counselling and testing in antenatal care.

3.4 Specific Objectives

1. To determine the socio-dcmographic characteristics of women attending antenatal care clinic.
2. To determine the proportions of women who accept counselling and testing of IIIV in antenatal care clinic.
3. To determine and to compare risk assessment between who accept and those who decline IIIV counselling and testing in ANC.
4. To determine reasons for accepting and reasons for declining IIIV testing.
5. To determine and to compare the prevalence of IIIV in those who accept and those who decline IIIV testing in ANC.

3.5 Research Question

What factors influence one to accept or to decline voluntary counselling and testing of IIIV in antenatal care clinic?

3.6 Hypothesis

1) Women who arc at risk of being HIV positive are more likely to decline IIIV testing.
2) Women who accept HIV testing have lower risk behaviour than those who decline testing.
3) Women who accept HIV counselling and testing are more knowledgeable on MTCT, PMTCT and VCT.
4) The prevalence of II1V is lower in those who accept than in those who decline.

CHAPTER FOUR

4.0 METHODOLOGY

This chapter describes the specific way in which the study was carried out. It includes a short profile of the study design, study area, study population, sampling procedure, methods of data collection, methods of data analysis and ethical considerations.

4.1 Study Design

This was a descriptive cross-sectional study that was designed to assess factors influencing acceptance of voluntary counselling and testing in antenatal care clinic. It was carried out using structured questionnaire and focus group discussions. Nurse Counsellors acted as research assistants and assisted in administering of the questionnaires. The questionnaires were administered to one woman at a time in the privacy of rooms that were provided by the clinic. The women were not supposed to give their names and were urged to answer the questions truthfully.

4.2 Study Area

This was carried out in Mathare North City Council clinic that has had an ongoing PMTCT program for the last two and a half years brought about by various studies that have been carried out by University of Nairobi. This is a health centre that offers a variety of health services, which included antenatal care, curative services.

maternal child health care, family planning and maternity services. On average there were 20 new cases per day of mothers coming to start antenatal care in this clinic.

The clinic is situated in the central division of Nairobi and mainly serves people from eight sub locations namely: Iluruma, Kiamaiko, Mabatini, Mathare area four, Mathare North, Mlango Kubwa, Pagani and Utalii with a population of 255,146

4.3 Study Population

I he study participants were pregnant women who were coming to begin antenatal care in the clinic.

Inclusion Criteria

All women attending the ANC and aged 18 years and above who were willing to participate and to answer the questions individually were invited lo participate.

4.3.1 Inclusion C riteria

Pregnant women who were less than 18 years of age and those not willing to participate were excluded from the study.

4.4 Study Procedures

Pregnant women who were attending antenatal clinic for the first time during current pregnancy were requested to remain behind after routine antenatal care for information 011 the importance of antenatal care, mothcr-to-child transmission of IIIV and prevention of mother-to-child transmission and the availability of VCT services for those who are ready and willing to take the test on the material day. Those who were not ready to take the IIIV test on that particular day were encouraged to come on any other day either alone or with their partner if he was willing.

The actual voluntary counselling was done on a one to one basis to avoid influence by other members of the group. Those willing to have the test signed an informed consent form and had blood drawn from them. They were informed that results would be available after one hour. Women who declined the IIIV test were offered antenatal prollle that included haemoglobin estimation and syphilis test using rapid plasma reagain (RPR). I'lac11 RPR positive result was confirmed with Abbot determine strips for syphilis. Unlinked anonymous HIV tests were done using IILISA on all RPR blood samples for those who declined IIIV testing. This is a legal and ethical technique that has been used for surveillance of HIV after explicit consent from the client [17, 38]. Questionnaires were filled during the waiting time.

4.5 l):iln Collection

I he instrument that was used for collecting quantitative data was a structured questionnaire, and for collecting qualitative data a total of three focus group discussions were carried out.

4.5.1 Questionnaire

Three trained assistants administered the structured questionnaires. Questionnaires were first pre-lesled, responses noted and any question that was ambiguous and sensitive was corrected. Data was collected from clients during the time of waiting for results and this was on a one to one basis in order to maintain confidentiality. (July number codes and not patient names or addresses were used for identification on the questionnaire. This will be coded latter for data entry. The principal investigator kept all questionnaires safely and maintained strict confidentiality at all times.

The peer counsellors assisted in identifying women coming to the clinic for the first time so as to avoid overwhelming of the counsellors. Questionnaires were administered to determine;

1. Socio-demographic characteristics
2. Perception of risk of IIIV infection
3. Altitudes to IIIV testing.

4. Knowledge and altitudes lo MTCT, PMTCT and VCT.

5. Reasons for refusal of IIIV testing

6. Reasons for acceptance of testing

4.5.2 Focus Croup Discussion

A prepared guideline for focus group discussion was used to collect qualitative data. These were carried out after quantitative data collection. A total of 3 focus group discussions comprising of **8-12** women were held. The topics discussed revolved around IIIV testing in ANC, VCT, MTCT and PMTCT

4.5.3 Minimi/in^ of Errors and Bias

This was achieved by training of the interviewers so as to make sure that they understood the questions well. The questionnaires were pre-testcd first and any ambiguity was corrected before the actual collection of data. The filled questionnaires were edited on a daily basis for completeness and to make sure that the entry is accurate.

4.6 Variables

Independent variables:

Independent variables were related to demographic characteristics such as

Age

Education Level

Marital Status

Social Economic Status

Dependent variables:

These were variables related to

Perception of risk

Attitudes to HIV testing

Acceptance of HIV test

Knowledge of mothcr-to-child transmission

Knowledge of PMTCT

4.7 Sample Size Estimation

Acceptance of HIV testing in Mathare antenatal clinic is about 67?/0 with a prevalence of 16%.

p = 0.67 (Proportion of pregnant women who accept HIV testing

l-p=0.33 (Proportion of pregnant women who decline HIV testing

z = critical value corresponding to a or (5 in the table of standard normal distribution

a? variance ~**p(** 1 **-p**)^0.2211

Power 80%, Confidence level 95%

n= desired sample size

OR: symbol for estimated prevalence among those who decline HIV tcsting=22%

0a: symbol for estimated prevalence among those who accept IIIV testing= 16%

For a difference in prevalence of OR -0A=22%-16%=0.06

Calculation of sample size will be obtained by using the formula

$$N = ?(z,.,/?) + zijj)^2 G^2 > \sim 8CT^2 = \frac{8*0.221\ 1}{(0r-0A)^2} = 491$$

$$(0R-0A)^2 \qquad (0.06)^2$$

4.8 Data Management and Analysis

Most data were collected from study subjects using questionnaires that were then entered into the database on a daily basis.

4.8.1 Storage and Safety

All questionnaires were filed in a chronological' manner using patients' identification numbers and they were stored in a lockable cabinet for future reference. The study database will be recorded in SPSS package.

4.8.2 Analysis

The dala were cleaned first before analysis. Descriptive and chi-square statistical analysis were cairicd out in relation to the study objectives and hypothesis. The statistics compared were the social demographic characteristics, attitudes to HIV testing, perception of risk; partner relations, prevalence of HIV in those who accept aikhtliose who decline reasons for declining an IIIV lest, and the proportion acceptance and declining 111V testing.

4.8.3 Qualitative Data

This was be analyzed manually. It was first transcribed before being synthesized and categorized into relevant themes of study objectives.

4.9 Ktliicui Considerations

1. Participation of clients was on voluntary basis
2. A signed informed consent was obtained before IIIV testing
3. I {very information from client and their IIIV results was confidential
4. Women who declined VCT of IIIV were offered antenatal profile which included haemoglobin estimation and syphilis testing. Haematinics were provided when it was necessary.
5. Testing of HIV for women who declined was anonymous unlinked testing using TLISA and this was done at the end of the study.

4.9.1 Ethical Review

Clearance to carry out the study was sought from the Kenyatta National Hospital Ethical committee and from the Nairobi City Council through the office of the Medical Officer of health.

4.10 Study Limitations

1. Some questions on risk assessment were sensitive and there is a likely hood that some of the responses were dishonest.
2. Since women were invited to participate in the study after routine antenatal care it is possible that the number who refused were influenced by the women feeling that it was a waste of time.
3. Women had received information on PMTCT and this could have inlluenced their responses.

CHAPTER FIVE

5.0 FINDINGS

This chapter lias the results of both quantitative and qualitative findings.

5.1 Social Demographic Characteristics

The respondents were women who were attending antenatal care in Mathare North City Council Clinic that is situated in Kasarani Division of Nairobi.

5.1.1 AITHE

A total of 510 women participated in the study. Qualification for participation was determined by age, only those who had attained the age of 18 years could participate. The respondents had a mean age of 24 years with a range of between 18 and 43 years while their partners/husbands had a mean age of 30 years with a range of 18 to 59 years. In the age group of 18-23 years there were far more women than men but in the subsequent age categories the men were more than the women. The husbands/partners were more likely to be older and this was statistically significant using a paired t-test (/;<().00I) (Fig. 1).

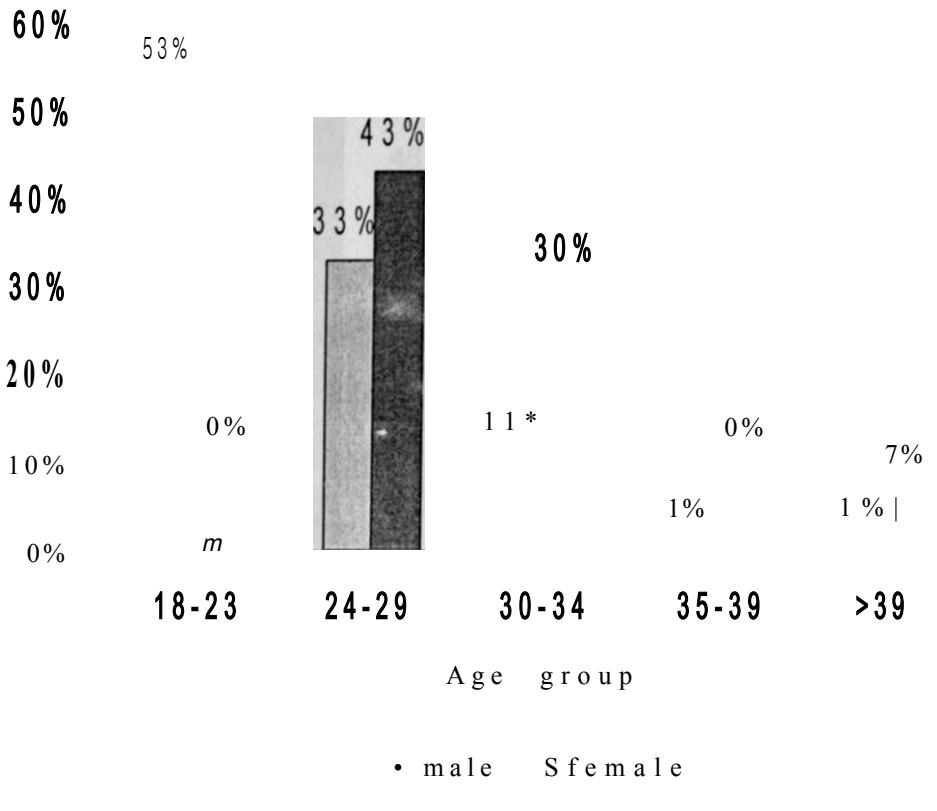

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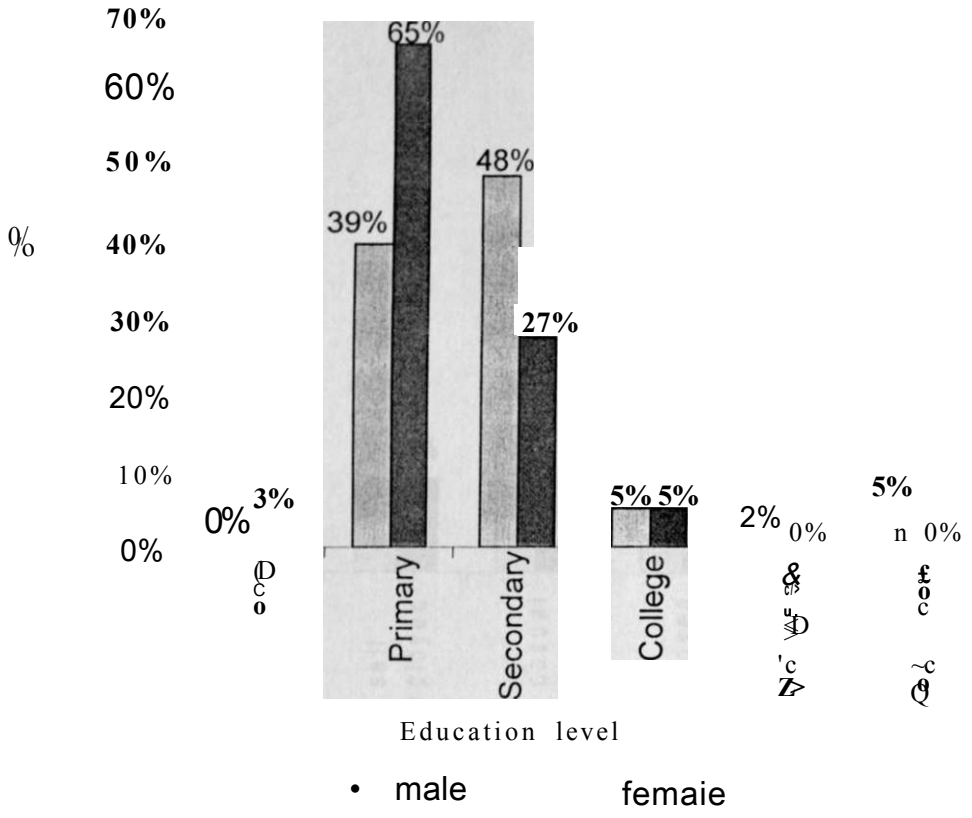
Figure I: Age distribution of respondents and partners/husbands

5.1.2 lulneation Level

Overall the respondents were less educated than their partners/husbands. There were 15 (3%) and 1 (0.2%) of the respondents and partners/husbands respectively with no formal education. Sixty five percent of the respondents had attained primary education as opposed to 39% of their partners. Respondents who had attained secondary education were 137 (27%) while partners were 247 (48%). College education was equal in the respondents and their partners/husbands at 5%. Only one (0.2%) respondent had attained university level of education compared to 8 (2%) of their partners/husbands had university level of education (Fig. 2).



1 imin e 2: Education level of respondents and partners/husbands

5.1.3 Employment

Respondents who were in formal employment were 50 (9.8%). while partners/husbands who were in formal employment were 241 (47%). Those who were self employed were 69 (14%) versus 122 (24%) of the partners. Women who reported that their partners/husbands had no employment or that they did not know where they worked were 25 (4.9%) and 5 (1.0%) respectively. Casual labourers were 18 (4%) respondents and 1 11 (22%) for the partners. Respondents who were not employed were 373 (73%) while partners who were not in any employment were 25 (5%) (Fig. 3).

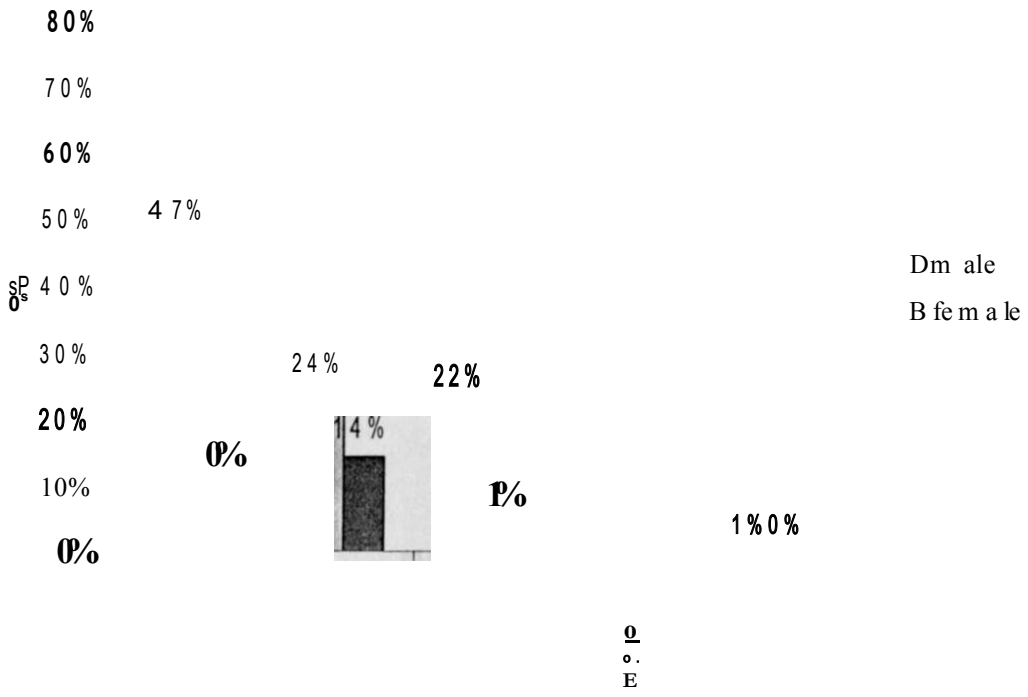


Figure 3: Employment Status of Respondents

5.1.4 Marital Status

The majority of the women were married; 409 (80%) were in monogamous relationships, 49 (9%) were in polygamous marriages, 52 (10%) were single, and 2 (0.4%) were separated. There were no divorced or widowed women (Tig. 4).

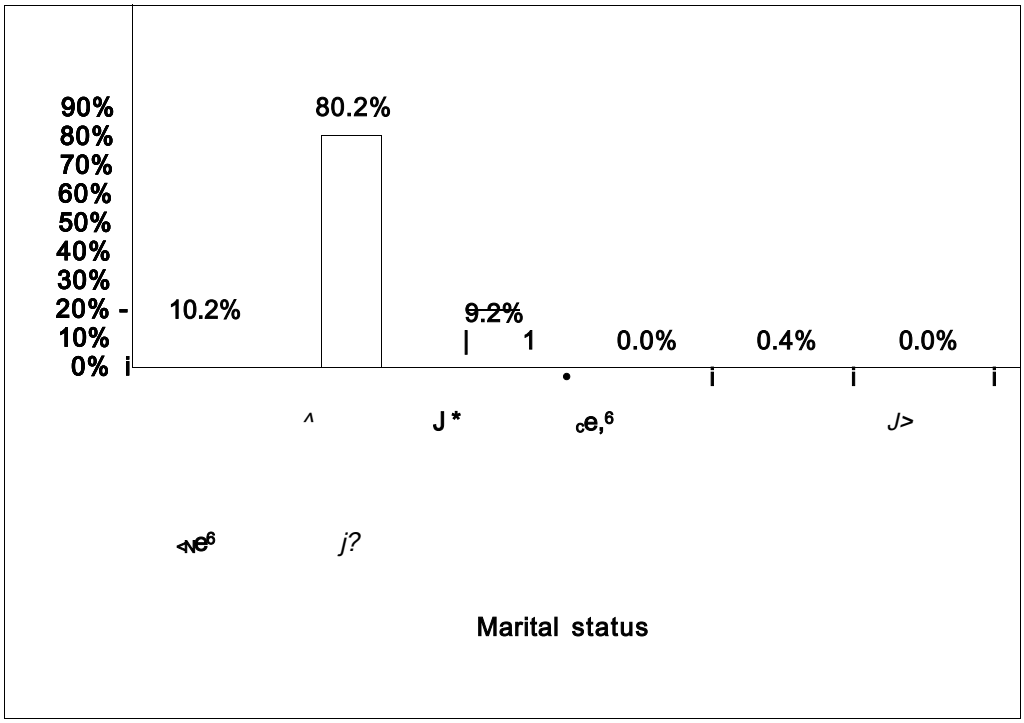


Figure 4: Marital status of respondents

5.1.5 Type of Marriage

Most of the respondents 412 (81%) said that they had gone through traditional type of marriage, 25 (5%) had formalized their marriage either through church or mosque and 31 (6%) were in non formalized marriages. The pie chart below figure 5 illustrates this.

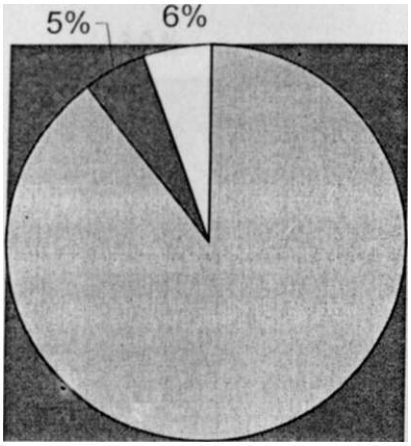


Figure 5: Type of Marriage of Respondents

5.1.6 Living Conditions

The median number of rooms per house was 1 with a range of 1-4. Ninety two percent of the respondents and their families lived in one roomed houses and 8% lived in 2, 3 and 4 roomed houses. The median number of people living in each house was 3 with a range of I to 10 (Table I Fig. 6).

Table 1: Number of Rooms per Mouse

Number of Rooms	Frequency n=5IO	Percent (%)
1	469	92
2	33	7
3	7	**1**
4	**1**	0

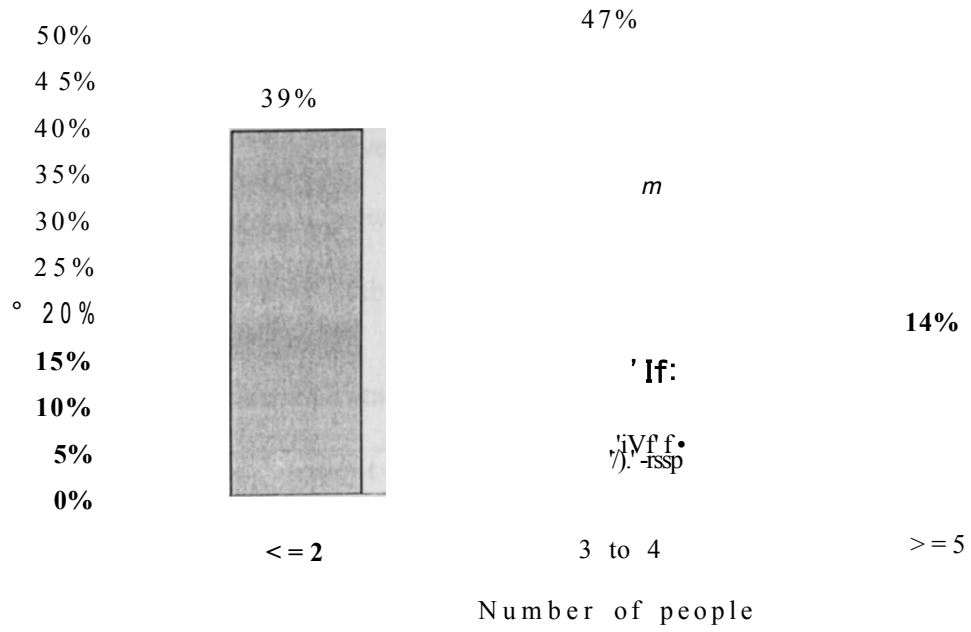


Figure 6: Number of People per Household

5.1.7 Rent

The median monthly rent was Ksh. 1,500 with a ranger of KSh.(0-7000). Figure 7 shows rent distribution.

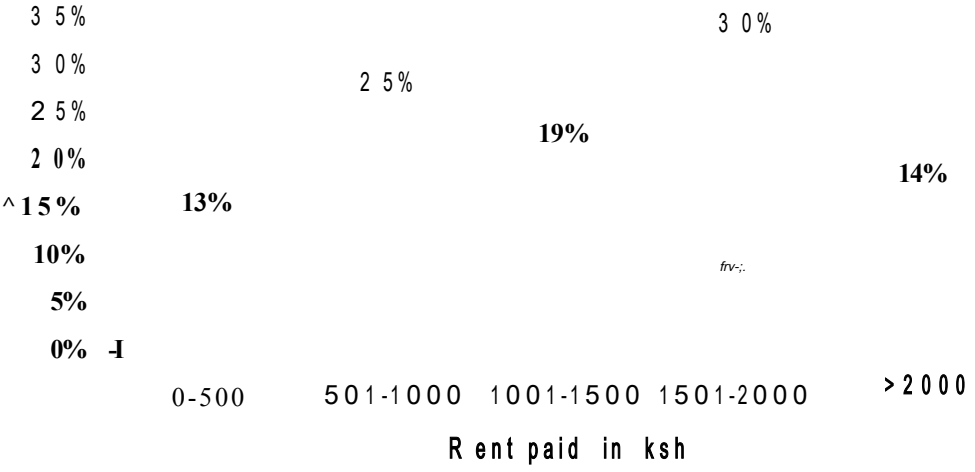


Figure 7: Amount of rent paid

5.1.8 Gestation

The mean gestation when women started ANC was found to be 25 weeks with a range of 2 weeks to 42. Sixty live percent started ANC at twenty eight weeks and below. Thirty percent started between 28 and 36 weeks and 5% started ANC at a gestation greater than 36 weeks table 2 and figure 8.

Table 2: Respondents Gestation at Commencement of ANC

Gestation at Commencement of ANC	Freq n=486	Percent
<= 28 weeks	318	65.4
>28 - 36 weeks	146	30.0
> 36 weeks	22	4.5

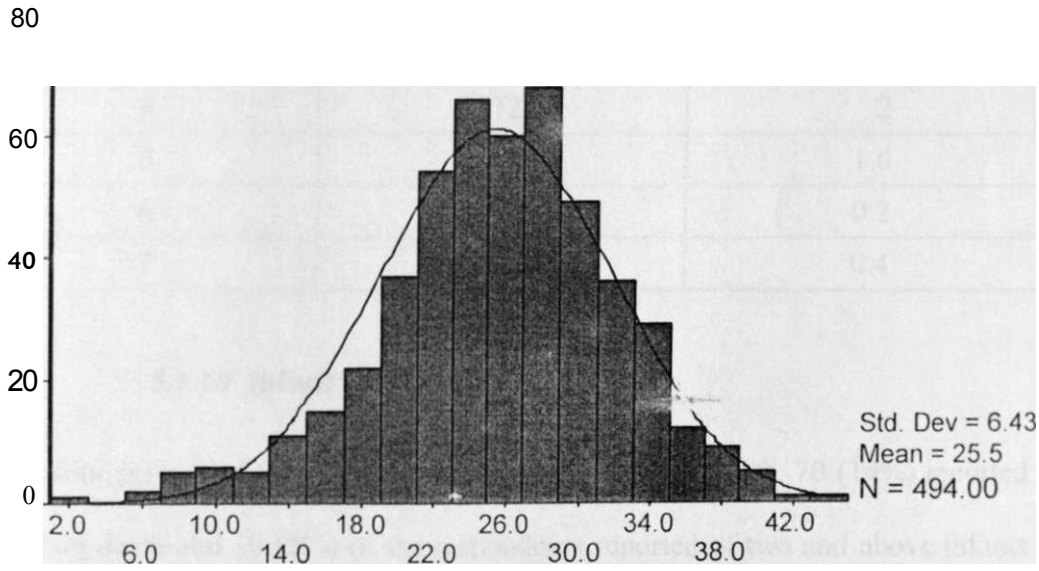


Figure 8: Respondents' gestation at commencement of antenatal care

5.1.9 Obstetric liislory

The median number of living children was one with a range of 0-7, 208 (41%) of the respondents were primigravida, 156 (31%) had one living child, 81 (16%) had two living children and 41 (8%) had three living children (tables 3 and 4). The median number of child deaths and miscarriages or abortions was the same at 0 with a range of 0-3.

Table 3: Number of Living Children

No. of Children	Frequency n=509	(%)
0	208	41
1	156	31
2	81	16
3	41	8
4	12	2
5	8	1.6
6	1	0.2
7	2	0.4

5.1.10 Ini'alit Deaths

Eighty four percent of the respondents reported no infant death, 70 (14%) reported one infant death and 10 (2%) of the respondents reported of two and above infants death, fable 4 below gives a summary of this.

Table 4: Number of infant deaths

No. of Infant Death	Frequency n=509	Percent
0	429	84
1	70	14
>=2	10	2

5.1.11 Miscarriages and Abortions

Ninety percent of the respondents reported no miscarriages, 44 (9%) reported one miscarriage and 2 (1%) reported 2/3 abortions/miscarriages (table 5).

Table 5: Number of Miscarriages/Abortions

No. of Miscarriages	Frequency n=503	Percent
0	457	90
1	44	9
2 and 3	2	1

5.1.12 Relationship with Partner

The respondents were asked various questions concerning their relationship with their partners. These included the duration that they had been together, whether the partner supported them adequately and whether he had ever assaulted them. They were also asked if they were aware that their partners had extramarital relationships.

I'our hundred and 11 fly two (89%) of the respondents reported that they lived together with their partners/husbands. One hundred and eighty one (36%) percent had been together for duration of two years and below while 323 (64%) had lived together for more than two years.

Respondents who reported of having ever been assaulted by their partners were 109 (21%). Ninety three percent (476) of respondents reported that their partners supported them adequately. Only forty (8%) respondents said that their partner had extramarital relationships.

Table 6: Relationship with partner

Partner Relationship	Frequency n=504	Percentage (%)
Live with partner	452	87%
Duration with partner		
<=2 years	181	36%
>2years	323	64%
History of assault by Partner	109	21%
Adequately supported by partner	476	93 %
Partner has other partners		
Yes	40	8%
No	168	33%
Don't know	295	59%

OIUKCHVIC 2

5.2 To Determine (lie Proportions of Women who Accept VCT

Out of a total of 510 women who were given information on mother to child transmission of IIIV, its prevention and the availability of voluntary counselling and testing services, 398 (78.0%) women consented to IIIV testing as shown in table 7 and the bar chart below in figure 9.

Tabic 7: Test acceptance

	Frequency n=510	**Percentage**
Test acceptance	398	78%
Test decline	112	22%

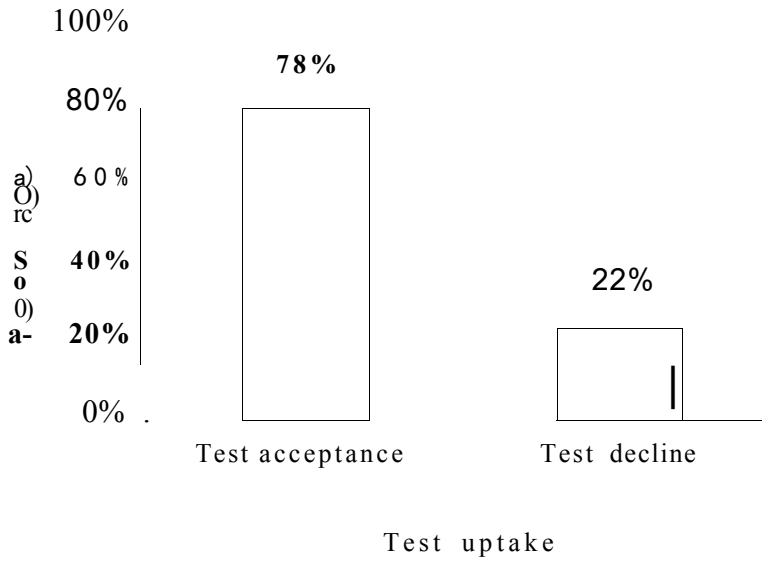


Figure 9: l est acceptance

5.2.1 l est acceptance and social demographic characteristics

The table below shows the proportion of women who accepted **IIIV** testing in the different age distributions. The proportions of respondents who accepted **IIIV** testing increased with increasing age as shown in table 8. There was a trend for women were older to accept IIIV testing compared to the young p=0.09.

Table <S: Age and test acceptance

Client's age	Test acceptance		Total
	No	Yes	
18-23	66 (24.3%)	206 (75.7%)	272(100.0%)
24 - 29	40 (23.5%)	130 (76.5%)	170 (100.0%)
30 - 34	5 (8.9%)	51 (91.1%)	56 (100.0%)
35 - 39	1 (16.7%)	5 (83.3%)	6(100.0%)
>39	0 (0%)	5 (100.0%)	5(100.0%)
Total	**112**	**397**	**509**

/?=().09

Table 9: Education and test acceptance

lulu eat ion Level	Test acceptance		
	No	Yes	
None	5 (33.3%)	10 (66.7%)	15(100%)
Primary	83 (24.9%)	250 (75.1%)	333 (100%)
Secondary	21 (15.3%)	116 (84.7%)	137(100.0%)
College	3(13.0%)	20 (87.0%)	23 (100.0%)
University	0. (0%)	1 (100.0%)	1 (100%)
Total	**112(22.0%)**	**397 (78.0%)**	**509(100.0%)**

/;=().() 09

Test acceptance and social demographic characteristics

The only social demographic characteristic that influenced test acceptance significantly was the level of education. Respondents who had an educational level greater than primary were more likely to accept Voluntary Counselling and Testing significantly; odds ratio 0.52 (95% CM 0.32-0.85/, /;=0.009. Marital status, formalization of marriage, and whether one was in employment did not influence test acceptance.

Table 10: Summary of IIIV Test Acceptance and Social Demographic Characteristics

	YES	NO	Odds ratio (95%C1) /;-valuc
Age			
<23	206 (76%)	66 (24%)	0.52(0.49-1.15)
>23	191 (81%)	46(19%)	0.19
Education			0.52 (0.32-0.85)
Primary /none	260 (75%)	88 (25%)	0.009
>primary	137(85%)	24(15%)	
Marital status			
Unmarried	44 (82%,)	10(19%)	1.27 (0.62-2.61)
Married	354 (78%)	102 (22%)	0.52
Marriage type			0.77(0.26-2.33)
tJnlegalised	340 (78%,)	98 (22%)	0.64
Legalised	18 (82%)	4(18%)	
(Employment			
Unemployed	292 (78%)	81 (22%)	1.05 (0.66-1.69)
Hmploycd	106(77%)	3 1 (23%)	0.83
Partners age			
<_29	189 (75%)	63 (25%)	0.72 (0.47-1.12)
>29	179(81%)	43 (19%)	0.14
Duration with partner			
<2	120(74%)	42 (26%)	0.74 (0.47-1.16)
>2	229 (80%)	59(21%)	0.18
Partners education			
Primary or none	157 (79%)	41 (21%)	1.18 (0.76-1.83)
> primary	227 (76%)	70 (24%)	0.46

5.2.2 Test acceptance and obstetric history

IIIV lest acceptance was not influenced by the number of living children one had, number of infant deaths or the number of miscarriages that one had (Table 11).

Table I I: Test acceptance and obstetric history

Obstetric History	Yi\s(n=398)	No (n=l 12)	/;-valuc
No. of living children	1	1	0.3
No. of infants death	0.2	0.1	0.2
No. of miscarriages/abortions	0.1	0.1	0.9

5.2.3 I est acceptance* and partner relations

Aspects of partner relations which included history of assault, partner support did not seem to influence test acceptance significantly (Table 12).

Table 12: Partner relations and test acceptance

Relationship	Yes n (%)	No «»<%)	/i-value
1 listory of assault	87(80%)	306 (77%)	0.6
Partner support	369 (77%)	24 (86%)	0.3
Living with partner	351 (78%)	41 (78%)	0.8
Partner has other partners	134 (80%)	34 (85%)	0.8

OBJECTIVE 3

5.3 Risk assessment

To carry out risk assessment, the respondents were asked to give information on tiie age at which they had their ilrst sexual intercourse, the number of sex partners tlicy had ever had in life and whether they had ever had an STD. Those who said that they had ever contacted an STD were asked whether they and/or their partners had received any treatment.

The mean age of sexual debut was 24 years and the range was (18-43) years. The median number of lifetime sexual partners was 2 with a range of 1 to 21. Table 13 below shows the results of risk assessment of the respondents.

Table 13: Risk assessments of respondents

Risk	
Age of sexual debut	Mean 24 years Range (l8-43)yrs
Number of lifetime sexual partners	Median 2 Range 1-21

5.3.1 History of sexually transmitted diseases

Twenty nine respondents reported that they had contacted sexually transmitted diseases as follows; 17 (55%) gonorrhoea, 7 (24%) syphilis, 4 (17%) chancroid and 2 (7%) genital Ulcers. Hie bar chart below figure 10 shows this distribution.

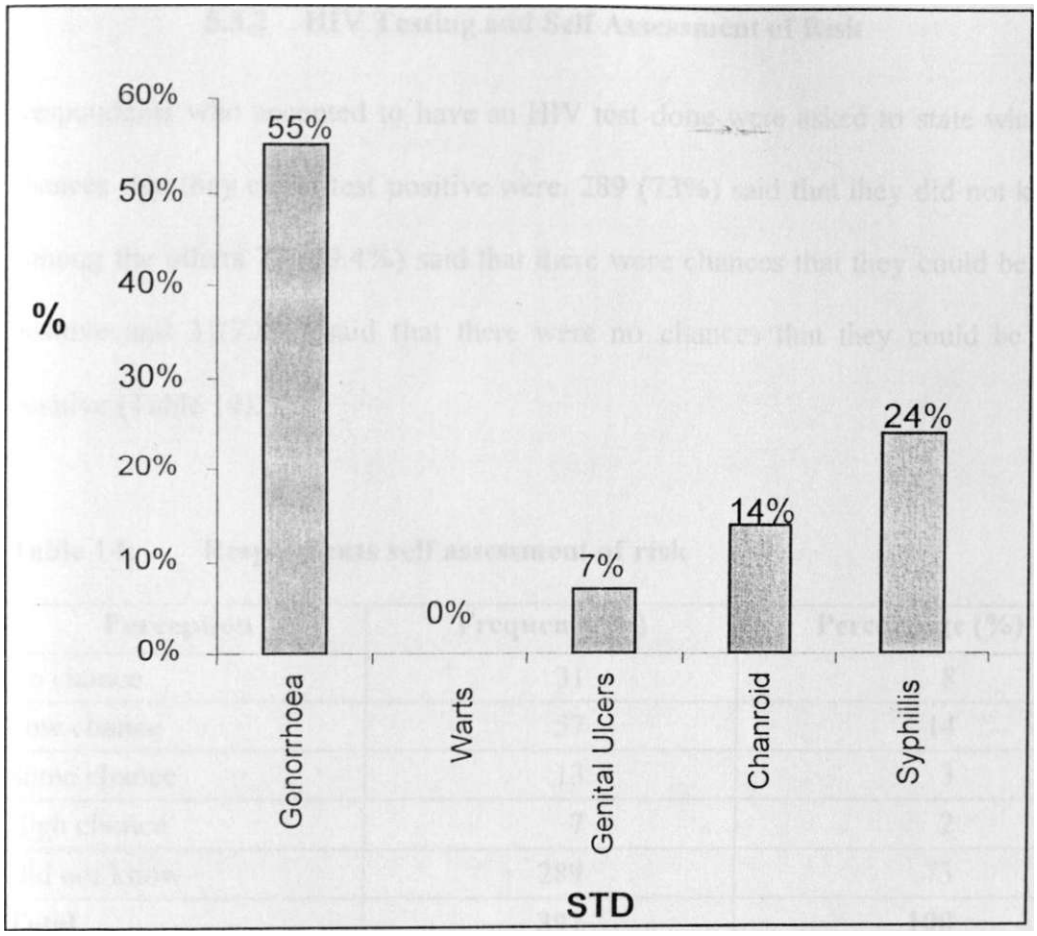


Figure History oi S I I) **(n=29)**

The 29 women were also asked whether they and their partners had sought medical treatment. Out of the twenty seven women who answered this question 18 (62.1%) said yes, while 5 (17.2%) said no, and 4 (13.6%) said that hey did not know whether their partners were treated for the STD.

5.3.2 IIIV Testing and Self Assessment of Risk

Respondents who accepted to have an **IIIV** test done were asked to state what the chances that they could test positive were. 289 (73%) said that they did not know. Among the others 77 (19.4%) said that there were chances that they could be **IIIV** positive and 31(7.8%) said that there were no chanCCS that they could be **HIV** positive (Table 14).

Table 14: Respondents self assessment of risk

Perception	Frequency(n)	Percentage (%)
No chance	31	8
Low chance	57	**14**
Some chance	13	3
High chance	7	2
Did not know	289	73
Total	**397**	**KM)**

5.3.3 Risk Assessment and l est Acceptance

Respondents who gave a history of having contacted syphilis were less likely to accept IIIV testing compared to those who had not. There was a significant relationship in lest acceptance between women who reported that they had contacted syphilis versus those who had not. Condom use did not influence acceptance of HIV testing significantly. This information is summarized in table 15.

Table 15: Cross tabulation of risk assessment and test acceptance

Risk	Yes	No	/>value
Age in years of sexual debut	IcS	18	0.8
Number of lifetime sexual partners	1.9	2.2	0.06
Condom use	145 (81%)	250 (76%)	0.2
I listory of contacting syphilis	3 (43%)	395 (78%)	0.02

5.3.4 Perception of Risk and 111V Test Results

Respondents who accepted II1V testing were asked what the chances that they would test positive were. Among the respondents who said that their chances of testing positive were high 3 (43%) actually tested positive while among those who said that the chance of testing positive was low only 5 (9%) tested positive. Responses of the respondents were statistically significant with their prediction of their **III**V test results/; 0.05 (Table 16).

Table 16: Cross tabulation of Perception of Risk and HIV l est Results

HIV risk perception	HIV results N=393		Total
	Positive	Negative	
Low chance	5 (9%)	52(91 %)	57 (100%)
Some chance	2 (15%)	1 1 (85%)	13(100%)
I ligh chance	3 (43%)	4 (57%,)	7 (100%)
None	1 (3 %)	28 (97%)	29(100%)
Don't know	47(16%,)	24 (84%)	287(100%)
Total	**58 (15%)**	**335 (85 %)**	**393 (100%)**

/;=().05

OBJECTIVE 4: To determine and to compare knowledge of MTCT, PMTCT and attitudes to HIV counselling and testing.

5.4 Knowledge of MTCT, PMTCT and VCT

This section assessed whether the women were knowledgeable on mother-to-child transmissions and its prevention, and their altitudes on voluntary counselling.

5.4.1 Knowledge of motlier-to-cliild transmission of HIV

When the respondents were asked whether a pregnant woman can transmit the IIIV virus to her unborn child, 99% of respondents affirmed that they knew The respondent's knowledge on specific aspects of transmission were: eighty eight percent during delivery, 76% through breastfeeding and *69%* transmission during pregnancy. Table 17 shows a summary of this.

Table 17: Respondents knowledge of motlier-to-cliild transmission

Know that:	Frequency 1")	Percentage
MTCT of HIV can occur	504	99%,
'Transmission can occur during delivery	450	88 %»
Transmission can occur during breastfeeding	389	***16%***
Transmission can occur during pregnancy	353	69%

5.4.2 Knowledge of prevention of mother-to-cliild of HIV

When the respondents were asked how one can prevent transmission of IIIV from an infected mother to her child, 420 (82 %) of them reported that MTCT can be prevented by use of drugs, 389 (76 %) by not breastfeeding at all, 234 (46%) by breastfeeding for a short time and 31 (6 %) said that it can be prevented in other ways.

Table IS: Knowledge of prevention of inothcr-to-child Transmission of IIIV

(n=509)

Prevention by use of drugs	420	82%
Prevention by not breastfeeding at all	389	76%
Prevention by breastfeeding for a short time	234	46%
Other ways	31	6%

Table 19: Other w ays Reported for PMTCT

Other w ays Reported by Respondents for PMTCT	Frequency n=19	Percent (%)
Delivering in the hospital	10	53
Use of condom	6	32
Delivery by caesarean section	1	5
Good hygiene	1	5
Good nutrition	1	5

5.4.3 Knowledge and Perception of Voluntary Counselling and IIIV Testing

When the respondents were asked whether pregnant women should be offered voluntary counselling and testing in antenatal care clinic, 506 (99%) said yes and 496 (97%) said that the only way to identify those infected was by carrying out an IIIV test. Table 20 shows a summary of this.

Table 20: Knowledge and Perception of Voluntary Counselling and Testing

Question	Frequency (n)	Percentage
Should pregnant women be offered VCT?	506	99%
Can identify those infected by a IIIV test	496	97%

5.4.4 Source of Information 011 Voluntary Counselling and Testing of IIIV

When the respondents were asked whether they had prior knowledge of the presence of VCT services in the clinic and how they had learnt of it, 333 (65%) of the respondents reported prior knowledge of the presence of VCT services in the clinic. The sources of VCT information were; 136 (27%) from the health worker, 103 (20 %) from friends. Those who had been informed by their relatives and neighbours were 39 (11%) and 38 (10%) respectively. The VCT poster was reported as a source of VCT information by 8 (2%) (Fig. 11).

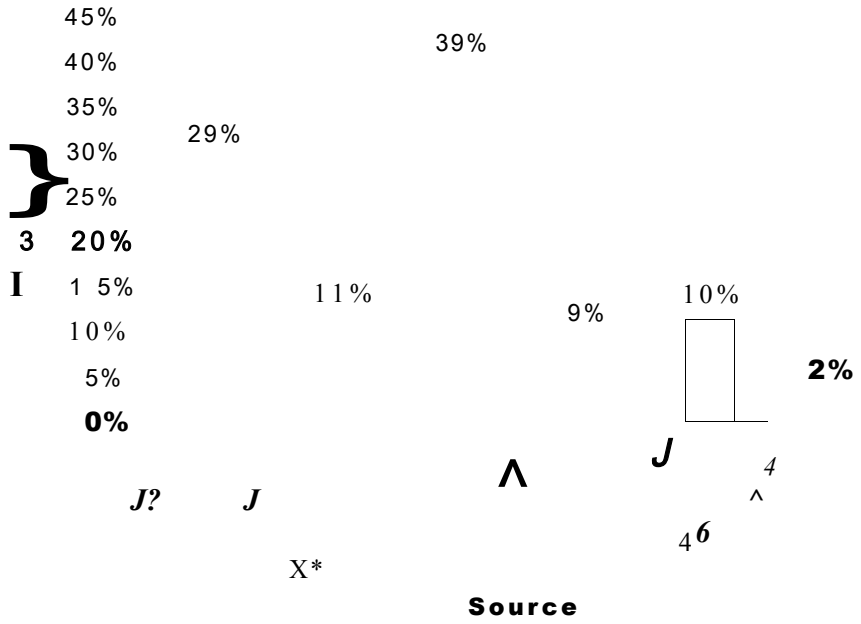


Figure 11: Source of VCT Information

Tabic 21: l est Acceptance and Source of Knowledge of VCT

Knowledge VCT	Yes n (%)	No .1 (%)	p-value
Through friend	85 (82%)	313 (77%)	0.2
Through relative	37 (97%)	361 (77%)	0.003
1 Icallh worker	1 17 (86%)	281 (75%)	0.009
Media	26 (84%)	378 (72%)	0.4
Neighbour	30(81%)	368 (79%)	0.6
Poster	5 (71%)	393 (78%)	0.7

Respondents who reported having received information 011 the existence of VCT services from health workers or their relatives were more likely to accept VCT *p--0.009* and */)-(). 003* respectively when compared to those who received information from their friends, media or neighbours.

Table 22: Test acceptance and knowledge of MTCT

n=398

Know ledge of Transmission	Yes n (%)	No ll (%)	p-valuc
1 hiring pregnancy	262 (74.2%)	136(87%)	0.8
1 hiring delivery	352(78.2%)	46(77%)	0.2
During breastfeeding	315(80.4%)	83 (70%)	0.02

'Sum of responses may cxcccd 100% because respondents may have provided more than one response.

Respondents who knew that IIIV can be transmitted through breastfeeding were more likely to accept IIIV testing. This was significant at P-value= 0.02. Knowledge of transmission during pregnancy and delivery did not seem to significantly influence lest acceptance.

Tabic 23: Test acceptance and knowledge of PMTCT

Knowledge of Prevention	Yes n (%)	No n (%)	p-value
By use of drugs	322 (76.7%)	76 (84%)	0.1
By not breastfeeding at all	302 (77.6%)	96 (76%)	0.7
By breastfeeding for short time	181 (77.4%)	217 (%)	0.7

Knowledge of the prevention methods available did not influence test acceptance significantly as shown in table 22 above.

Table 24: Cross Tabulation of Test Acceptance and Knowledge of VCT

Knowledge	Yes n (%)	No n (%)	/;-value
Prior knowledge of VCT at facility	282 (84.7%)	114(65%)	<0.001
Iwcr been tested before	129(85%)	268 (75%)	0.02

Prior knowledge of the presence of voluntary counseling and testing services significantly influenced test acceptance 85% vs. 65% (j)= <0.001)

Respondents who had been tested for IIIV before were more likely to accept IIIV test. There was a significant difference in test acceptance between respondents who reported having ever been tested before and those who had not been tested before *p*=0.02

OBJECTIVE 5

5.5 To Determine Reasons for Accepting and Reasons for Declining IIIV Testing

5.5.1 Reasons for Accepting IIIV Testing

Respondents who accepted IIIV testing were 398 women, of these 319 (80.2%) said that they had already made the decision to take the IIIV test before coming to the clinic. Majority of the women said that they accepted testing so that they could learn their status 327 (82.2%). Only 85 (21.4%) said that the reason of taking the test was so that they could help the baby if they tested positive. Others 19 (4.8%) said that they accepted the test so that they themselves could be helped if they tested positive.

Table 25: Reasons of Test Acceptance

Reason for acceptance	Frequency	Percentage
To learn status	327	82.2%
So that baby can be helped if 1 test positive	85	21.4%
So that I can be helped if 1 test positive	19	4.8%
Others	6	1.5%

Table 26: Others Reasons Ciiven for IIIV 1 est Acceptance

Reason	Frequency	Percent
Feeling unwell	1	0.2
It is a must for pregnant women	1	0.2
To plan for my family's future	I	0.2
To confirm my status	1	0.2
To confirm whether am still positive	1	0.2
I was told to repeat after 3 months	1	0.2

5.5.2 Health Worker influence on test Acceptance

When the respondents were asked whether the health worker influenced their decision to take the test, more than half said not at all 240 (60.3%). less than half reported that the health worker influenced their decision to take the test 139 (34.9%) and only 17 (5.5%) reported that the Health Worker influence was very little.

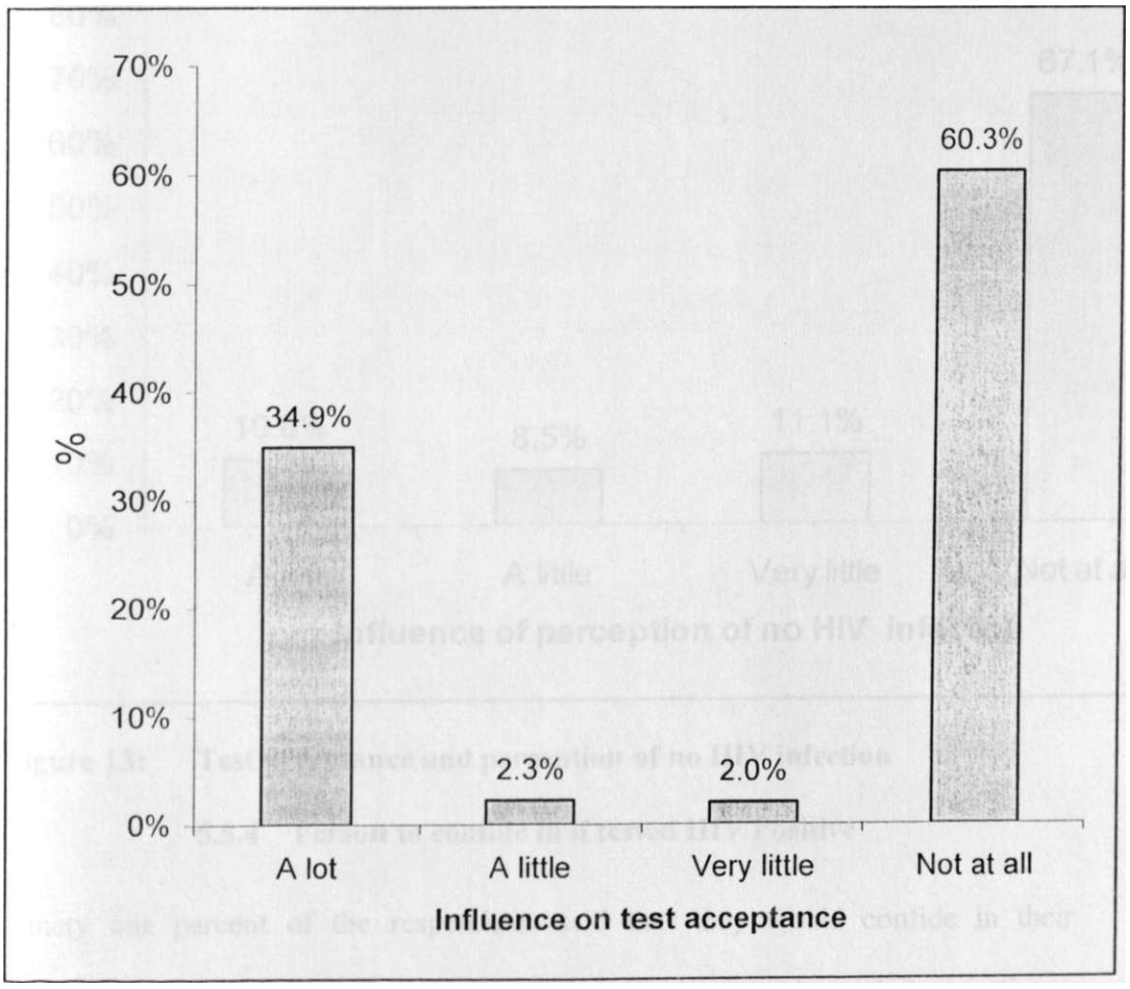


Figure 12: Health workers influciicc on test acceptance

5.5.3 Influence of Perception of not being infected by IIIV oil Test Acceptance

When the respondents were asked whether they accepted to take the test because they felt uninfected, 43 (10.8%) said yes, 267 (67%) said not at all, and 77 (19.6%) said that their test acceptance was influenced very little by their feeling that they were not infected.

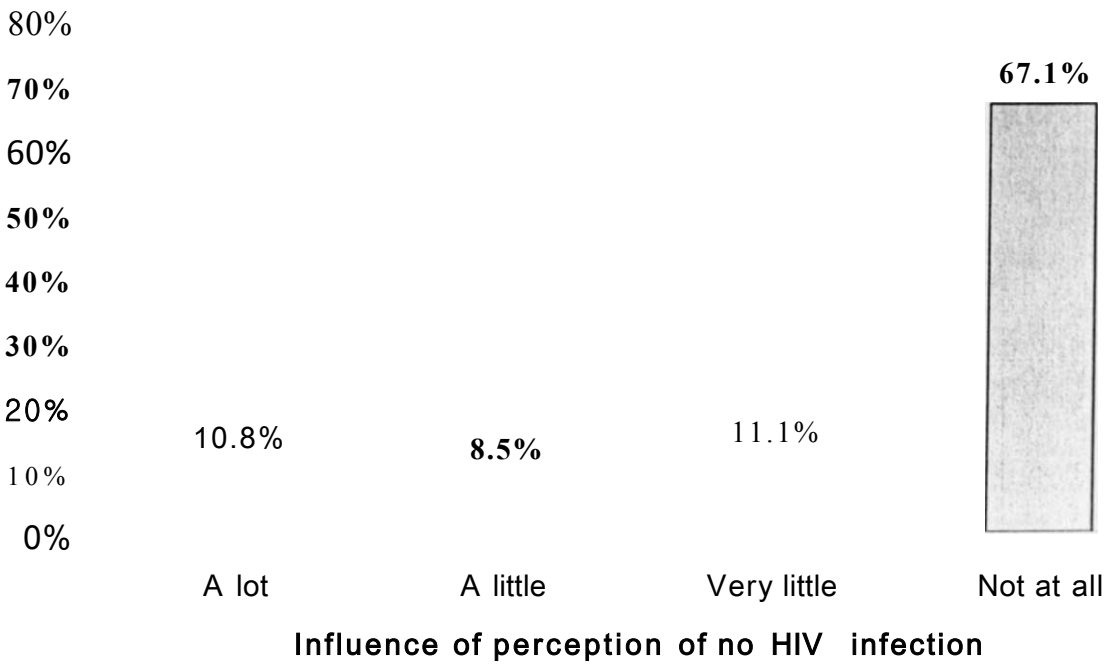


Figure 13: l est acceptance and perception of no IIIV infection

5.5.4 Person to confide in if tested IIIV Positive

Ninety one percent of the respondents said that they would confide in their husbands/partners if they positive. Other proportions are as shown below in figure 25.

Tabic 27: Persons to Confide IIIV Test Results

Person to Confide to	n (%)
1lusband/Partner	363 (91%)
Nobody	21 (5%)
Friends	8 (2%)
Siblings	9 (2%)
Parents	24 (6%)
Other relatives	5(1%)

5.5.5 Person to Blame if Tested Positive

When the respondents were asked who they would blame if they tested HIV positive, 175 (44%) of the respondents said they would blame their partner if they tested positive, 168 (42. %) said they would blame nobody and 25 (6%) said that they would blame themselves. Fig. 14 shows a summary of this.

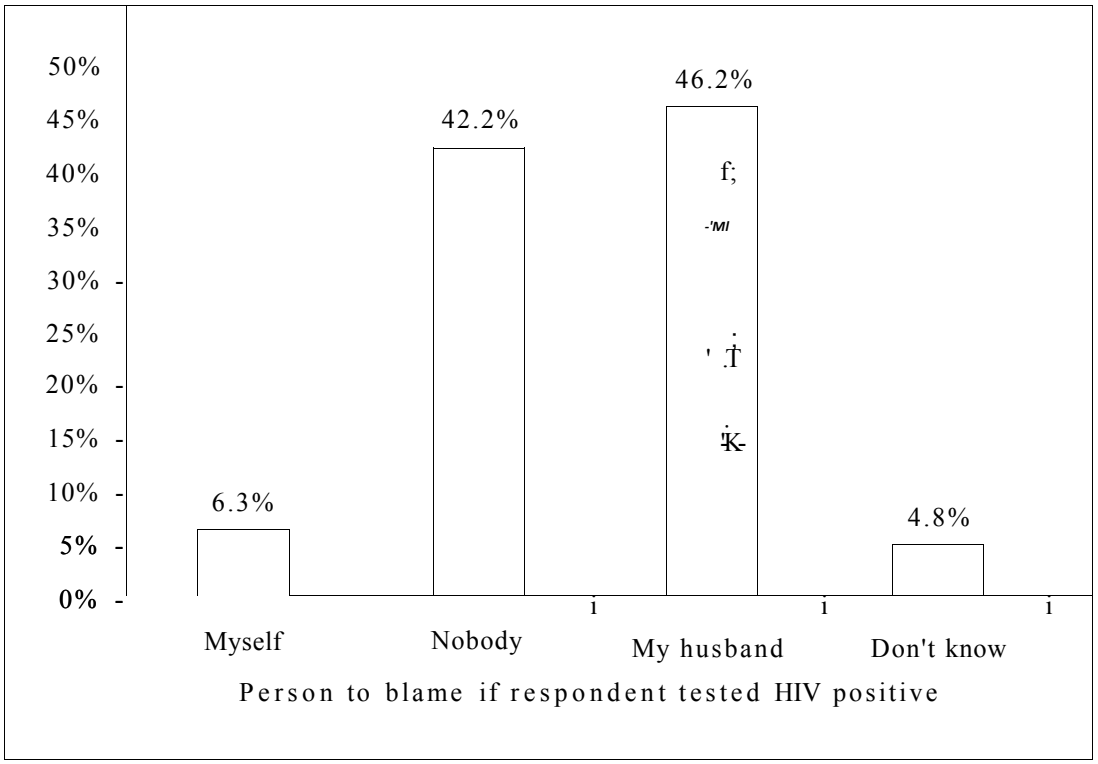


Figure 14: Person to blame if Respondent tested IIIV positive

5.5.6 Reaction of Partner/Husband if Client Tested Positive

More than half of the women said that they did not know what the reaction of their partner would be if they tested positive. Women who said that their husbands would blame them were 41 (10.3%) while those who said that their husbands would desert them were 4 (1.0%). Results of PGI) also showed tha(>mosl of the women did not know what the reaction of the partner would be if they tested positive.

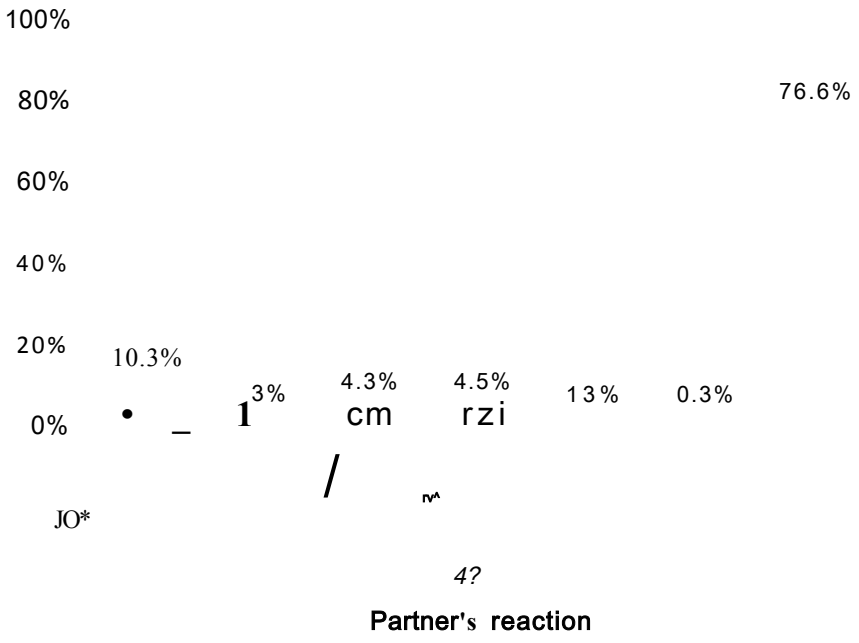


Figure 15: Partner's Reaction to Positive IIIV Results

5.5.7 Reasons for non acceptance to HIV testing

A total of 1 12 respondents did not accept voluntary counselling and testing. These respondents were asked to give reasons as to why they had not accepted to take up an IIIV lest. Various reasons for non acceptance to take the IIIV test were given as follows: 79 (71%) said that they wanted to tell/ask their husbands first, 9 (8%) said that they were not ready and 1 1 (10%) said that they wanted to take the test together with their husbands.

Table 2N: Respondents' Reasons for 11011 Aeeeptanec to IIIV Testing n=l 12

Reason	Frequency	Percentage
Not ready	9	8.0%
Tested recently	3	3%
Would like to take test with my husband	11	10%
Want to tell/ask my husband first	79	71%
I'm in a hurry lack of time	1	1%
Husband partner refused	2	2%
Others	J	3%

Participants in the focus group discussion expressed the main reason as fear of death and more so if proper counselling is not performed. Women were of the opinion that people should not be tested the first time they are told about IIIV testing, but should instead be given more time to think about it.

5.5.8 Health worker's Influence 011 11011 acceptance to IIIV Testing

When the respondents who did not accept IIIV testing were asked whether the health worker inlluenecd their decision to decline IIIV testing, 77 (69%) of the respondents said not at all, 20 (19%) of respondents said that a health worker inlluenecd them a little/very little. There was 1 (0.9%) woman who said that the health worker inlluenecd her decision to decline IIIV testing a lot.

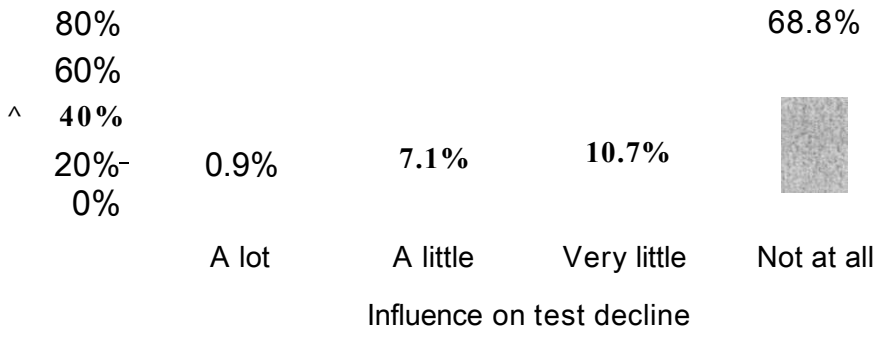


Figure 16: Health Workers Influence oil IIIV Test Decline

5.5.9 Feeling Uninfected and noii-acceptancc of IIIV testing

Seventy two (64%) of the respondents who did not accept IIIV testing said that their decision to decline IIIV testing was not influenced by the feeling that they were not infected. Fight (7%) said that their non acceptance was influenced to a large extent by the feeling that that they were not infected and 16 **(14%)** said that their non acceptance to IIIV testing was influenced little/very little by the feeling that they were not infected.

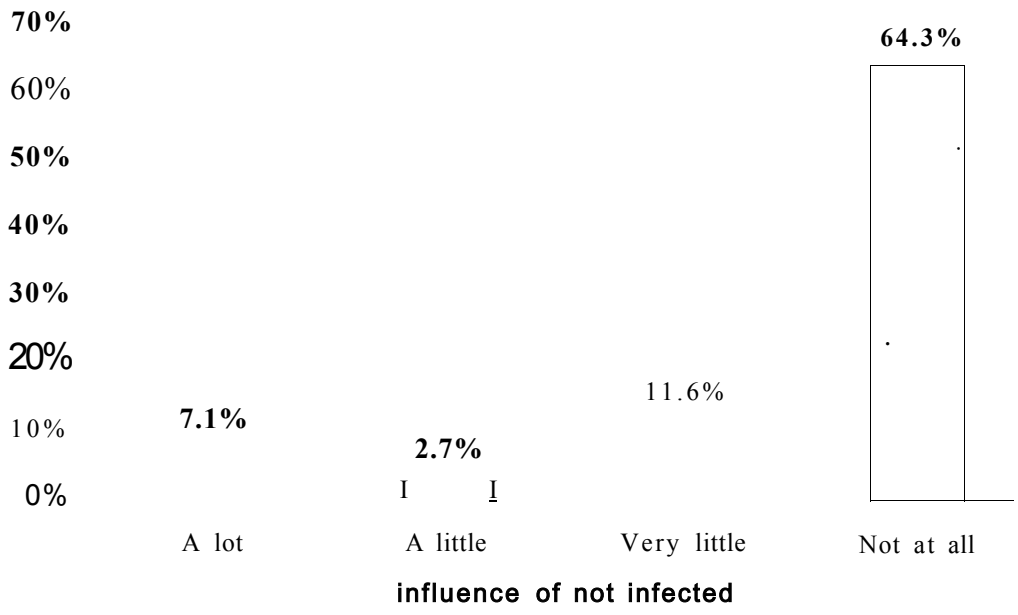


Figure 17: 'I"est Decline and Feeling Uninfected

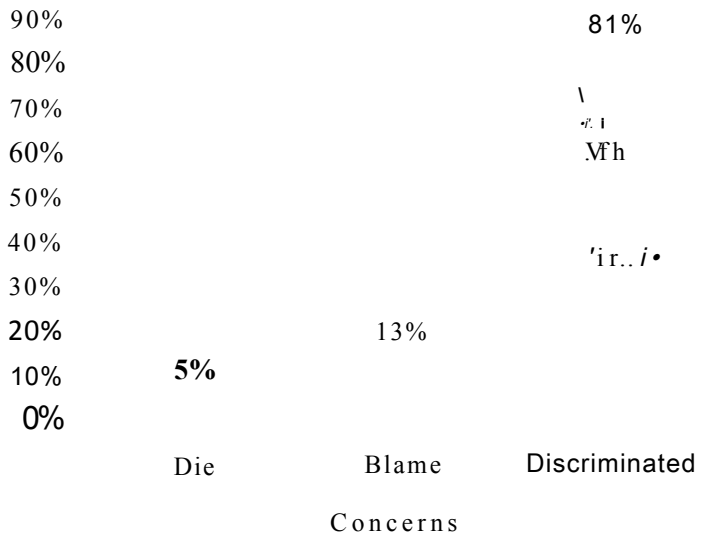


Figure IS: Concerns about Positive 111V Results

5.5.10 Concerns about Positive IIIV Results

The concerns expressed by respondents who declined HIV testing were; 90 (81%) feared to be discriminated, 15 (13%) said that they would be blamed for having brought the disease and 7(5%) feared to die.

5.5.11 Future testing

When respondents who declined to accept the IIIV test were asked whether they planned to lake the test in future, 84% said yes. Only one woman said no, and 7 women did not answer the question. Respondents gave various occasions of when they would like to lake the lest. Those who said that they would like to take the test during their next antenatal visit were 88 (91%), after delivery and when the partner would be ready were 3 (3.1%)

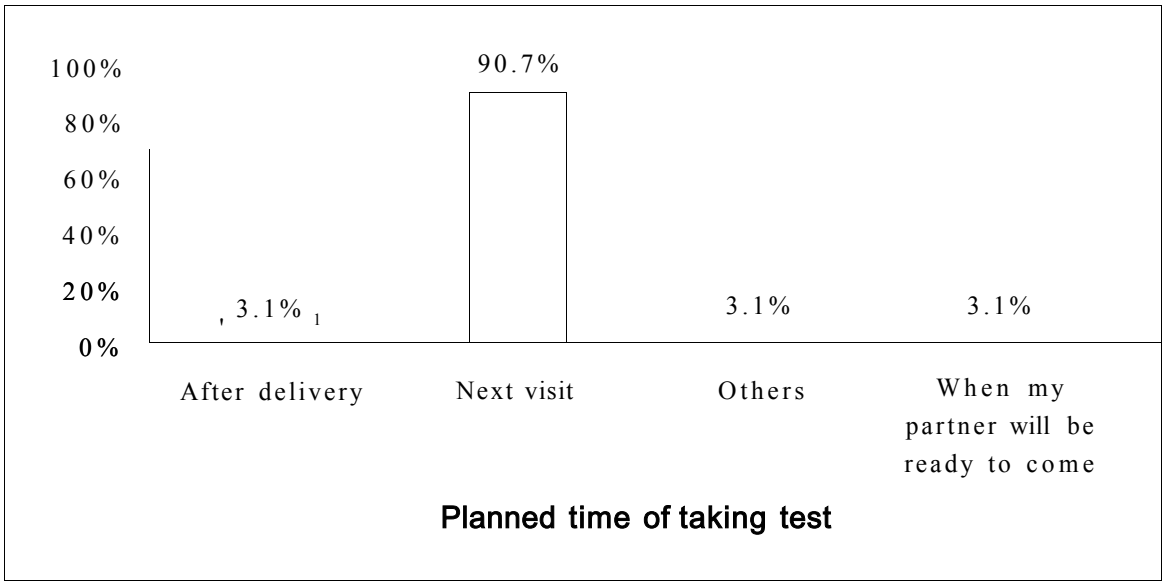


Figure 19: Respondents' response on when to take the IIIV test in future

Among Ihc women who declined HIV testing when asked who they think should be tested for HIV. 82 (73%) said that everybody should be tested for HIV while 29 (26%) said that only those who want to be tested for IIIV should be tested.

OBJECTIVE 6

5.6 To determine and to compare the prevalence of HIV in those who accept versus those who decline IIIV testing in ANC

Out of the 398 respondents who accepted HIV testing, 75 (15%) tested positive and therefore this gave a prevalence of 15 % in those who voluntarily accepted HIV testing, while out of the 112 who did not accept HIV testing, 18 (16%) tested positive after unanimously testing the samples using the ELISA method and therefore this gave a prevalence of 16% in those who declined HIV testing. There was not statistical significance in the prevalence of IIIV between those who accepted and those who declined HIV testing (/;=0.8). These results arc summarized in the table below;

Table 29: Prevalence of III V

	Frequency n	**Prcvalcncc%**	*p-VI line*
Test acceptance	398	75 (15%)	0.8
Test decline	112	18(16%)	

RESULTS OF IOCUS CROUP DISCUSSIONS

A total of three locus groups discussion were held with the antenatal women at Mathare North city council clinic.

From the l[:]GI)s it was evident that the respondents were knowledgeable on the fact that mother -to- child transmission ofHIV can occur from a mother who is infected with IIIV to her child. This compared well with the quantitative analysis where overall knowledge of mother-to-child transmission was 99%.

Misconceptions were raised regarding prevention of **HIV** from an infected mother. A few asked whether it was possible to prevent infection to the baby if one was already infected, and they said there was no need of being tested for **HIV** for the baby's sake because if one was infected it was almost inevitable for the baby not to get infected, *"/low can the baby fail to he infect al when it is sharing the same blood with the mother? If the mother is infected the baby must also be infected. "*

This also compared quite well with the quantitative analysis where 82% knew that prevention can be achieved by use of drugs and only 46% knew that transmission can be achieved by exclusive breastfeeding for a short time. A reasonable number asked, *"How can the baby consume milk which is infected with 11IV and not get infected with the virus".* Most asked how exclusive breastfeeding could prevent transmission to the baby.

Majority of the l'GD participants were in agreement that VCT should be provided to pregnant women but only on voluntary basis. One of the reasons given was; *"if you test someone who is not ready she might just go and commit suicide if she tests positive".* Results of quantitative analysis compared well with 99% of the respondents said that VCT was an important service for mothers attending ANC.

Participants also recommended more than one session of counselling before the actual testing. One participant said, *"You know if one is tested when they are not reaity, one can just collapse and die".* Among the respondents who accepted IIIV testing, the main reason they gave for accepting to have an IIIV test was to learn their status. Very few attributed their acceptance to the baby's benefit and this also compared quite well with the results of quantitative analysis where only 21% attributed their acceptance to be for the baby's benefit.

Positive results were associated with death, and some said they did not think that there is any amount of counselling that can deter them from committing suicide. They expressed fear of disclosing their results to the partner especially if they tested positive. I lie reactions from their purlncrs/luishnnds if they tested positive were varied from shock, being assaulted, being blamed and denial of test results but majority said that they did not know how their partners would react if they tested positive. Some of the responses were: -

"lie would slap and blame me ".

"lie will he shocked and he will go for testing ".

"we will start blaming each other and none of ns will accept responsibility ".

"He will say am the one who is responsible ".

"He will say we both go for testing but I know he will first Deny ".

When participants were asked on whom they would disclose their results to regardless of whether the results were positive or negative some said their spouses while others said that they would not disclose to anybody. They claimed that IIIV lest results were a personal issue, and one respondent said, " *the only person you can tell is the one you share a blanket with".* Only one woman said that she would tell her mother.

Majority of the women said that they would blame their partners/husbands if they tested IIIV positive and only a few said that they would not blame anyone. Various reasons were given for refusal to testing. These included; prior testing and having knowledge of ones seroslatus, people with risky sexual behaviours, one suspecting that they are already infected and fear. Some women also said that they did not want to stay in the clinic for long because they had left young children with their neighbours or that they needed to prepare lunch for their school going children.

Participants said that it was important to seek for permission from their husbands/partner because of fear of been accused of having brought the disease. One respondent said, *"If you test without his permission he will accuse you of having extramarital affairs while he is away looking for food".*

CHAPTER SIX

6.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Discussion

Voluntary Counselling and testing (VCT) is a cornerstone for early access to prevention, care and support services. High public awareness of I1IV, increasing numbers of persons with HIV/AIDS, and knowledge of personal risk behaviours results in an increased desire to learn one's seroslatus.

This study sought to determine factors that influence acceptance of voluntary Counselling and testing in antenatal care clinic. In this chapter the major issues that emanated from the findings are discussed and based on these findings conclusions and recommendations were made.

The results from this study revealed that most social demographic characteristics do not influence acceptance to IIIV testing. The only characteristics that were significantly associated with acceptance to IIIV testing were age and level of education. Women who accepted HIV testing were more likely to he older than those who declined mean age 24years and 23years respectively (p-valuc =0.03), and had educational level greater than primary (p-value =0.0.09).

Similar results were obtained in a population based study in Zambia[39]. This was however contrasted by a similar study done in Abidjan, Cote D'lvoire which

established that the probability of test refusal was higher in older women compared to younger ones [40]. While a study that was done in UK showed no difference in the social demographic characteristics.[41]

Women's obstetric history that is number of living children, number of infant deaths and number of miscarriages did not influence them to either accept or decline to take the IIIV test. Studies that have been undertaken on risk factors for IIIV infection among asymptomatic pregnant women have revealed that being unmarried primigravida, a history of the most recent child having died, and a history of having been treated for a vaginal discharge, history of an ulcerative sexually transmitted disease, multiple sexual partners, intravenous drug users and history of blood transfusion are the main risk factors for IIIV infection but not risk (actors lor lest acceptance[42]

This study also found out that women who had older partners were also more likely to accept IIIV testing compared to those who declined. Thirty years versus 28 years (I'-valuc 0.02) I his is expected and can be explained by the stability of the relationship. There was no significant difference between women who accepted versus those who declined IIIV testing in terms of marital status, amount of rent paid, type of marriage and partner relationships.

Knowledge of mother-to-child transmission of IIIV was high. Majority of the women were of the opinion that voluntary counselling and testing should be offered

in antenatal clinic (92.2%) and most knew that the only way of identifying those who were infected was by taking an 11IV(test 97.3%). During one the FGDS women expressed that "/7 *may be just as good to test all pregnant women so that their children could be prevented from becoming infected with HIV".*

Opt out approach is widely used in developed countries because of its high acceptance rates and there is a tendency in many health facilities to adopt it. Concerns have been raised that routine testing in Africa might deter women from seeking prenatal care and might result in fewer women returning for test results[43].

Most of the women who accepted to lake the lest had made the decision to do so prior to coming to the clinic (80.2%)). and more than half said that the health worker did not influence their decision to take the test (60.3%) and neither did the feeling that they were not infected inlluence their decision to take an IIIV test (67.1%).This shows that there is a high public awareness and readiness for VCT in the area, not withstanding the importance of IIIV testing in antenatal clinics.

Respondent's acceptance of VCT was significantly inlluenced by whether they had prior knowledge of the presence of VCT services. Those who said that they knew of the existence of VCT services were more likely to accept IIIV testing when compared to those who said that they did not know 85% vs. 65%, (p-valuc <0.001). This shows the importance of continuous education and mass educational campaigns to inform and educate people of the health facilities in their regions.

Sources of VCT inrormalion also seemed to influence test acceptance. Those who got information from health care workers and relatives were more likely to accept IIIV testing significantly. This can be explained by the fact that information from a health worker is normally taken seriously and thus the health worker should be equipped with the right information by attending trainings.

Almost all the women interviewed knew that in general a IIIV infected woman can transmit the virus to her child (98.8%), though knowledge of specific aspects that include transmission during pregnancy (69.2%), during delivery (88.2%) and transmission during breastfeeding (76.9%) were poorer. These findings compares well with a similar study that was done in Lagos, Nigeria except that in this group their knowledge of prevention of MTCT by use of drug* was poor".

Majority of the participants also had a good knowledge that prevention of IIIV from mother-to-child can be achieved through use of drugs (82.4%) and by not breastfeeding at all (76.3%). Knowledge of prevention by breastfeeding for a short lime was given by less than llfly percent of the respondents (45.9%). The study established that the respondents had moderate knowledge of PMTCT and continuous education is still required if PMTCT programs arc to be successful.

I he study also established that 78%% of women accepted to be tested for 1IIV. This finding is consistent with other studies but testing rates have been found to be as

low as 6.5% in a population based survey in Zambia, and to be as high as70-90% among women attending antenatal care in Zambian and in other African populations[39]. Factors that have been attributed to low rates have included concerns on confidentiality and length of time spent waiting for results[39].

Women, who reported having been tested for IIIV before, were more likely to accept IIIV testing (85% vs. 75%> l$^{>=}$0.02). This compares well with a study done in USA which found that women who had been tested multiple times were more likely to initiate IIIV testing, lest acceptance in a similar study done in Uganda found out that uptake of testing was higher in women who had risk factors for IIIV, especially those who believe themselves to been exposed[15].

I lie main reason women gave for wanting to take the lest was so that they could know their status (82.2%»). Only 21.4% said that they were taking the test so that their babies could be helped. This contrasts with a study that was done in Nigeria which found out that majority of the women were willing to undergo IIIV testing in pregnancy particularly il it would assist in preventing transmission of IIIV to their babies".

Knowledge of ones status has been found to be an important prevention and intervention tool. '1 hose people who learn they arc seronegative can be empowered to remain infection free and those who are infected can be provided with the care and support that Incy require. To achieve this, counsellors have an important role to

play in ensuring llial pregnant women receive adequate information to form decisions. If a woman chooses not to have the lest, counsellors should explore her reasons without prejudice[46].

In this study, there was no statistical significant difference in prevalence rates of HIV between women who accepted IIIV testing and those tested anonymously 14.8% and 15.7% respectively P-value= 0.8. This is contrasted by a study done on women attending antenatal clinic in a district hospital in Entebbe, Uganda, which found that IIIV prevalence was higher in VCT than in anonymously tested women in the first month of the program (20% vs. 11% P=0.05), and in months with <70% VCT uptake (17% vs. 8%>), P=0.001) but was similar in months with high with high VCT uptake[45].

With the rapid expansion of PMTCT and VCT programs, there has arisen a suggestion that the data obtained in them can be used for IIIV surveillance instead of using the anonymous unlinked testing (AUT) method that is normally employed. AIJT has the advantage of having no selection bias and the availability of individual data. Therefore if one is to use PMTCT or VCT data for surveillance one must consider the possibility of selection bias[47].

Twenty two percent of the respondents (112) refused to accept HIV testing. The study found these to be women who were younger and had less than primary education. These findings are different from another vMudy on attitudes towards

serological tests for infection during pregnancy in Belgium which found that refusal for syphilis and IIIV testing was associated with high education[48].

Majority of them when asked why they declined to take the test said that they wanted to tell/ask their husbands first before they are tested (70.5%). This contrasts with a study done in New York USA where the women gave the predominant reason for refusal of IIIV testing as anxiety. In this study refusal for testing was not influenced by the counsellor (68.8%) or by the perception that the woman was not infected (64.3%). And majority even expressed a wish to take up the test the next time they come to the clinic (83.9%). This is contrary to what was found in a study done in Abidjan where the counsellors and high education level in women was associated with refusal of IIIV testing[10]

Other studies have shown that the percentage of providers reporting universal testing was positively associated with the degree to which testing was encouraged, and particularly encouragement to women perceived to be at low risk '. Other studies have found that the reasons given range from cultural and religious beliefs and to those who said that they were not at risk"'. Antenatal women's refusal to VCT can be considered as a major drawback towards PMTCT and PMTCT plus interventions and strategies should be put in place that would provide antenatal women with proper education.

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The most common barriers to IIIV testing relate to stigma, rejection, and abandonment, being blamed lor having brought the infection or abuse particularly if the woman is found to be IIIV positive. In one study in Rwanda IIIV positive women were more likely to suffer physical abuse and the break-up of relationships after disclosure of their scropositivity[50] and this could be explained by 70.5% women who said that they would like to consult their partners first before taking the IIIV lest.

Surprisingly, studies have shown that when the man is involved in issues of voluntary Counselling and testing, if the woman tests HIV positive, the uptake of interventions for PMTCT are high. A study on couple counselling in Matharc North city Council clinic on couple counselling found out that women who were couple counselled were 3-fold likely to return for Nevirapine and to report administering it al delivery. Couple counselled women were also 5-fold more likely to avoid breastfeeding compared to those who were counselled individually[51]. Uptake of testing has also been found to be higher when the partner is involved 96% vs. 79 % [52].

The mean age of sexual debut was 18years in both groups (p-valuc=0.8). There was a trend for women who had more lifetime sexual partners to decline IIIV testing compared to those who had less 2.2 versus 1.9 (p-value =0.06). In general there was no significant difference between women who accepted or declined HIV

testing in the reported history of a sexually transmitted disease 372 (79%) vs26 (68%).

IIIV seroprcvalencc in those who accepted IIIV testing was 14.8% compared to 15.7% in those who declined. liven though this difference is not statistically significant, some studies have found contrasting results. One study that was done in South Africa found a prevalence of 44% in anonymously tested samples. This was an alarming statistic as by then the prevalence in the population was then being quoted as 29.4%[53].

The study found out there was no statistically significant difference between respondents who accepted and those who declined IIIV testing in risk assessment. This included age of sexual debut, number of lifetime sexual partners, history of sexually transmitted diseases in general. These findings are consistent on a study done on IIIV testing and counselling among adolescents attending family planning clinics in USA[54]. There is even debate that screening for HIV based on risk factors could identify persons at substantially higher risk but would miss a substantial proportion of those infected [49].

Although there was no significant difference in history of sexually transmitted diseases between women who accepted and those who declined IIIV testing, women who reported that they had been infected with syphilis were more likely to decline IIIV testing (P-value 0.02). This can be explained by the fact that history of

an S I'D could have been interpreted to be synonymous with being HIV positive and the issues which come with a positive test like stigma and discrimination , abandonment ,rejection and sometimes violence could have taken preference and thus influenced test refusal.

This contrasts with a study done in United Kingdom which found that uptake of testing was associated with an HIV test being offered, partner numbers and previous SIT diagnosis[39]. Assessment of risk is important but there is a caution that selectively offering 111V testing based on risk assessment would not be useful because it would leave out many infected persons[54].

Aspects of partner relationship which included assault, support and promiscuity had no influence in test acceptance. This is an expected finding because violence has mainly been noted to occur after notification of positive test results[32]. Counsellors are now advised to screen clients for the violence and counselling should explicitly address the stigmatization of IIIV positive women and negative reactions leading to violence.

6.2 Conclusions

The study was able to attain its objectives. The main objective of the study was to determine factors that influence acceptance of voluntary counselling and testing in an antenatal care setup.

From the findings of the study, it is apparent that women attending antenatal clinics have adequate knowledge of MTCT, PMTCT and VCT. However, it emerged that women had concerns of being discriminated or blamed for bringing the disease if they tested positive. Post test counselling of HIV positive results should deal with issues of violence and how to deal with it.

The older and the more educated women were more likely to accept HIV testing. In this study, 80% of the respondents had primary level education or less and this might explain the relatively low acceptance of VCT.

Women who were aware of the existence of voluntary counselling and testing in the clinic were more likely to accept IIIV testing and infact majority had made the decision to be tested before coming to the clinic. Public information, education and communication should be continued to increase awareness to a higher level.

Partner involvement in antenatal VCT would be important and would definitely increase acceptance of testing. Majority of the women who refused or differed their HIV testing wanted to ask or tell their partners first. Perception of the women that they were not at risk of HIV did not influence their acceptance and neither did it influence their refusal of VCT.

Concerns of blame, abandonment, accusation and violence should be addressed during pre-test counselling and more during post-test counselling for those who test positive

6.3 Recommendations

1. As the country is embarking on its PMTCT programmes there is need to continue providing information on PMTCT so that acceptance of VCT can increase from 76% to above 90%. This would lead to an increase of PMTCT strategies which include uptake of Nevirapine and other ARVs, and infant feeding choices among mothers attending antenatal clinics.
2. Involvement of partners is crucial if PMTCT interventions programmes are to be successful and to achieve this couple counselling and testing in an antenatal care setup should be widely encouraged and promoted.
3. To achieve the goal of routine I IIV testing of all pregnant women, VCT should be made a routine procedure in antenatal care clinic.
4. All women especially women of child bearing age should have access to IIIV counselling and testing. To achieve this, TBAs should be trained on VCT and administration of Nevirapine.
5. Methods of providing PMTCT information need to be re evaluated. Women with less than primary education should be identified and a simple education method like using pictures should be devised so as to ensure that they understand PMTCT and other health related information.

6. Modalities to eope with stigma and discrimination need to be addressed as this might be the main reason for reduced uptake of VCT and might translate to hindrance of access to care and treatment for HIV positive mothers.

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APPENDIX 1

HIV COUNSELLING AND TESTING IN ANTENATAL CARE SETUP

Factors influencing acceptance of HIV Testing among women attending Antenatal Care clinic.

CONSENT FOR STUDY PARTICIPATION

INVESTIGATORS:

Marjory Waweru MBchB University of Nairobi.

Prof Elizabeth N. Ngugi, Professor, Department of Community Health University of Nairobi.

Mr. E.K. Njeru, Lecturer, Department of Community Health, University of Nairobi.

James Kiarie, MBChB, MMed, MPH, Lecturer, Department of Obstetrics and Gynaecology, University of Nairobi.

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. You may ask anything about the research or 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". We will give you a copy of this form for your records. You are free to refuse to participate and withdraw from the study at any time without loss of benefits.

PURPOSE AND BENEFITS

We are requesting you to participate in study where information will be collected from a group discussion and from a private discussion with you. We want to learn more about why some women accept HIV testing and why others refuse HIV testing in Antenatal Clinic

PROCEDURES

You can take part in this study if you are willing to commit about 1 hour for the group discussion or 1 hour for the private in-depth interview.

FOCUS GROUP DISCUSSIONS

This is what will happen if you decide to participate in the group discussion. First, you will be asked questions about your age. marital status, and living situation. You will thereafter be asked if you accepted or declined HIV testing and why you accepted or declined. For those who accepted you will be asked whether you will be willing to share your results with other people. You will then be invited to assemble in a room in the clinic where you will meet 5 to 9 other people who are part of the study.

During the discussion, the group will talk about the reasons why women accept to have HIV test and why others decline to have HIV test. During these discussions, everybody can give their opinion. However, you are not required to speak unless you would like to add to the discussion. Someone who is part of the study team will help lead these discussions. This is called a focus group discussion. The discussion will last about 1 hour and you will participate in 1 session only. The discussion will be tape recorded so that the investigators can later review all the information that was discussed.

IN-DEPTH INTERVIEWS

This is what will happen if you are interviewed privately. A nurse, doctor, or counsellor who is working on the study team will meet with you in a private room and ask you many questions. The majority of questions will be on what are the concerns of those who accept/decline HIV testing.

RISKS, STRESS, OR DISCOMFORT

For the focus group discussions, the investigators will review the recordings of the discussion and hear what contribution you made. Your names will not be recorded, but it may make you uncomfortable to have your words recorded. In addition, others in the discussion group will hear your contributions. Sharing this kind of information can make some people uncomfortable. After the discussions women will be requested to not disclose what was discussed, but there may be loss of privacy if they tell others about your contributions.

If you choose to have an in-depth interview, some of the questions may make you uncomfortable. For example, the interviewer may ask you questions on your sexual history. You can refuse to answer any questions that you do want to answer.

OTHER INFORMATION

If you participate in a focus group discussion, you frill be asked to introduce yourself at the start of the session. No information that can be used to identify you will be collected or reported. The tape recorder will be turned off during the time of introductions. The investigators will listen to the tapes and write down all that is said without including anything that can identify you. The tapes will be destroyed within 1 year of the end of the study.

For the in-depth interviews, the person asking you questions will not write down information about you that can be used to identify you. For example, he or she will not write down your name or your birthday on the interview form. We will make every effort to keep your information confidential. However, 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. Your name will not be used in any published reports about this study

HIV testing will be done on all blood samples removed for unlinked anonymous testing. But we will not be able to link this test results to their owners because we are not going to take any names or addresses. You may withdraw from the study at anv time and you may refuse to discuss any of the issues raised.

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 one of the investigators 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

Nairobi

Telephone 2726300

Chairperson: Professor K

APPENDIX 2

Questionnaire No

Interv iewer Number

Date of interv iew

A: SOCIO- DEMOGRAPHIC

1. Date of birth / /

2. Age_____years

3. a) Highest level of Education: None •

Primary •

College u

University

b) Number of school years

4. Marital status: Single •

Married monogamous •

Married polygamous •

Divorced G

Separated •

Widowed •

5. If married specify type of marriage: Traditional •

Church/mosque •

Legal/civil •

Living together only •

6. If single have you ever been married before? Yes G

No •

7. Employment: Salaried job I

Self-employment I

Casual labour •

Housewife •

Unemployed I

8. How many rooms arc there in your house? (Exclude bathrooms toilets)

9. How many people live in your house?

10. How much monthly r>nt do you pay?

B: OBSTETRIC HISTORY

11. Date of last menstrual period

12. Number of living children

13. Number of infant death

14. Number of miscarriages/abortions

C: **PARTNER RELATIONS AND HIV/AIDS**

15. Partner's age

16. Partner's employment: Salaried job

Self employment r

Don't know C

Casual labour •

None •

17. Partner's level of education Primary C

Secondary r

College

University

18. Do you live with your current partner? Yes n

No •

19. If yes, how long have you been married

/

20. Does your husband have another partner (s) you know of? Yes I

No •

If yes, how many

21. Does your partner support you adequately? Yes •

No •

22. Has he ever assaulted you? Yes •

No •

D: Knowledge and attitude questions

23. Can mothers who have the AIDS virus (HIV) transmit it to their babies?

Yes •

No •

Don't know •

24. When can HIV be transmitted from mother-to-child?

During pregnancy

During delivery

During breastfeeding •

I don't know •

Others (specify) •

25. How can one prevent HIV transmission from mother-to-child?

By use of drugs •

Bv not breastfeeding at all •

By breastfeeding for a short period of time D

Others (Specify)

26. How can one know that someone is infected by the HIV virus?

By been tested G

By looking at them •

I don't know •

27. Do you think that pregnant women should be offered pre-test counselling and testing of IIIV?

Yes •

No •

I don't know •

28. Did you know that IIIY testing is offered in this clinic before today? Yes •

No n

If yes

29. I low did you know that we are offering IIIV test here?

Through friends U

Through a relative •

Through a health worker •

Through the media •

Through my neighbour •

30. I lave you ever been tested before? Yes LI

No •

31. Ifyes what were your results Positive •

Negative •

I don't know •

I can't remember •

E: Accepted HIV test

32. Did you consent to having an HIV test today? Yes •

No •

If no move to No.40

33. If yes, what are the chances that you might be HIV positive?

Low chance •

Some chance •

High chance

None

I don't know

34. Why did you accept to be tested for HIV?

So that I can be helped if I am positive

I want to know my status •

So that my baby can be helped if I am positive •

Others , •

5. Had you made the decision to be tested before coming? Yes

No

36. How much do you think the following affected your decision to take voluntary ?

testing?

Health worker •

A lot •

A little •

Very little D

Not at all •

b. Feeling that you are not infected by HIV?

A lot D

A little •

Very little •

Not at all •

37. If you test negative whom would you tell?

Nobody •

Husband/partner •

Friends •

Sisters/Brothers •

Parents •

Other relatives •

38. If you tested positive whom would you blame?

Myself •

Nobody •

My husband •

I don't know •

39. What would be the reaction of your partner if you tested positive?

He would blame me •

He would desert me

I don't know

F: DECLINED HIV TEST

40. Why did you refuse to take an HIV test today?

I was tested recently •

I would like to take the test with my husband

I want to tell/ask my husband first

I am in a hurry /lack of time •

I want to be tested after delivery

My husband/partner refused •

Others (specify) 0

41. Who should be tested for 1IIV?

Those who want •

Those who are siek •

I don't know •

Everybody •

42. Would the following be of concern to you? (Prompt)

If I'm tested and I turn positive I will die •

I will be blamed for positive results -v •

Discrimination if I am positive •

43. How much do you think the following influenced your refusal to take voluntary testing?

a. Health worker

A lot U

A little U

Very little •

Not at all Tl

b. Feeling that you are not infected by HIV?

A lot •

A little •

Very little •

Not at all •

44. Are you planning to take the test in future?

Yes •

NoD

45. IF YES, when?

After delivery

Next visit

Others

When my partner will be ready to

Sexuality/Risk Assessment

46. Age at first sex

47. I low many sexual partners have you had in life?

48. I lave you ever had the following?

Gonorrhoea	•	Chancroid
Warts	•	Syphilis
Genital ulcers	•	

49. Were you treated?

Yes •

No •

1 don't know •

50. Was your partner also treated?

Yes •

No •

I don't know U

51.1 lave you ever used a condom?

Yes •

No •

52. What is the attitude of your husband towards using a condom?

He doesn't like them •

He likes using them , •

I le would never use them f1

53. IIIV result:

Positive •

Negative •

No results •

APPENDIX 3

FOCUS GROUP DISCUSSION (FGD) MODERATOR'S GUIDE

INTRODUCTION

Good morning ladies thank you for coming. I am Dr. Marjory Kabura from the University of Nairobi. With me is. . . . . from_____The purpose of this discussion today is to learn what you think about Voluntary Counselling and Testing (VCT) of HIV. The information you will provide will assist in improving methods of providing VCT in ANC with emphasis on prevention of mother to child transmission of HIV.

I would like to encourage you to speak as freely and frankly as possible. The responses you give in this discussion will be confidential and anonymous and no one will ever know what you personally said please speak up if you disagree with what's being said. We would also like to record your answers both by writing and using a tape recorder to help in the analysis of your answers. Please note that there is no direct benefit in participating except that the information will be useful to policy makers.

The discussion will take about one hour. Do you all agree to participate in this discussion?

Note that you may leave at any time during the discussion.

1. Preamble

- What are the common health problems in the community nowadays?
- Which diseases would one fear to have?
- Which diseases can one get by having many sexual partners?

- Do you think that AIDS is as serious as it is made to be?

2. (General information on IIIV

- What causes IIIV/AIDS?
- I low can you get IIIV?
- I low can one know that they have IIIV infection?

3. Motlicr-to child-transmission of IIIV and PMTC

- Can a pregnant woman with 1lIV infect her baby?
- When can she infect her baby?
- I low can she prevent her child from being infected?

4. Knowledge of Voluntary Counselling and testing and mothcr-to-child transmission

- I lave you ever heard of VCT?
- What is the benefit of one knowing their IIIV status?
- What is the benefit of a pregnant woman knowing their HIV status?
- What are your concerns regarding HIV testing?
- Should testing of IIIV be done on everyone/every pregnant woman?

5. Why do some women refuse to have an IIIV test? (Probe on fears)

- Probe on husband's role
- Consequence of a positive test

6. Why do some accept IIIV testing in spite of the consequences (probe on consequences)

7. Where would most people want to access VCT?