

Addis Ababa University

School of Graduate Studies

**Assessment of factors associated with acquiring HIV among VCT
Seeking married women at health institutions in Addis Ababa**

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List of Abbreviation

UNAIDS – Joint United Nations Programme on HIV /AIDS

OSSA – Organization of Social Services for AIDS

FGM - Female genital mutilation

ABC – Abstain, be faithful and condom use

EDHS- Ethiopia Demographic and Health Survey

Abstract

Back ground: About forty million people live with HIV/AIDS world wide. The proportion of females infected by HIV is increasing from time to time. Nearly 50% of the 40 million people living with HIV/AIDS are female. Rates of HIV infection among married women or those in committed partnerships are increasing rapidly. In Sub-Saharan Africa, where women have been hardest hit by the AIDS pandemic, 57% of those who test positive are women and at least one third of these women are married. Biological susceptibility, economic dependence, cultural factor, violence, early marriage, harmful traditional practices, gender inequality, lack of knowledge, high risk sexual behavior of their partner and absence of female controlled prevention methods are some of the factors that make women more vulnerable to HIV.

Objective: The objective of the study was to identify factors that are associated with acquiring HIV among married women.

Methods: The study design was a Cross Sectional Survey with internal comparison using structured questionnaire .The study subjects were married women who came to VCT centers. Socio demographic variables, risk perception, marital situation, condom use, decision making power and violence were used to assess the vulnerability of married women to HIV. Proportion, Chi square, Odds ratio and logistic regression were used for analyzing risk factors against HIV status as appropriate.

Results: The study composed 602 married women of whom 38% were in the age group of 20-24 years. The most common ethnic group was Amhara comprising 55.1%. Ninety two percent were Christian by religion. Majority of the respondents attended secondary and above education. About fifty eight percent were housewives and 34% of the respondents had a monthly income of 201-599.

According to this study one of five married women was HIV positive (24.9%). Low husband income, work place of the husband out of Addis Ababa, perceived risk factor as husbands' extramarital sexual relationship were highly associated with HIV positivity. Having premarital test and discussion of sexuality among couples were found to be protective of HIV.

Conclusion: Low husbands' income, husbands' work place out of Addis, no premarital test, perceived risk to HIV and no discussion of sexuality between couples are highly associated with being HIV positive.

Recommendation: Based on the study findings empowering married women through improving educational and economic status, increasing awareness and negotiating skills on safer sexual practices, encouraging discussion about sexuality among couples, targeting education for married men on safer sexual practices, working with the communities to change the attitude towards men's extramarital sexual relationship and introduction of female condom are recommended.

1. Statement of the problem

Although HIV/ AIDS is global epidemic, the majority of people living with HIV/ AIDS are in sub-Saharan Africa. About Forty million people live with HIV world wide in 2006. Sub-Saharan Africa is a home for 25million people living with HIV AIDS. In the early days of the epidemic, men vastly outnumbered women among people infected with HIV. It took a long time for the world to admit HIV as a threat to women. The proportion of females infected by HIV world wide increased from time to time. Sub-Saharan Africa is the only part of the world where HIV prevalence and AIDS death are higher for women than men (1, 2). Nearly 50% of the 40million people living with HIV/AIDS are female. In Sub-Saharan Africa, 59 % of those infected with the Virus are female. Studies in Sub-Saharan Africa showed that there are 14 infected women for every 10 infected men (1, 3).

According to Ethiopia Demographic and Health Survey (EDHS) the estimated adult HIV prevalence in 2005 was 1.4 %. The prevalence in women is nearly 2% while the prevalence among males was under 1% (4). HIV prevalence among VCT clients was to be persistently higher among females 15.7% when compared to 11.6% among males. This difference of infection level is even more significant among young females age 15 – 24 (5, 6). Women are biologically more susceptible to HIV infection than men. Data from a number of studies revealed that male to female transmission during sex is 2-5 times if no STI present (7, 8, and 9). Sexual coercion and violence against women increases the risk of HIV infection for women (10, 11).

Women's increased risk is also a reflection of gender inequalities. In most societies, the rules governing sexual relationships differ for women and men where men holding most of the power exposing many women including married women to their husband's or partner risky sexual behavior (12). According to the study of International Women's Health Coalition, the biggest HIV/AIDS risk for women and girls is marriage and more than 4-5 times of new infection in women results from sex with their husbands or primary partner (3).

Where women fear violence from men including emotional and psychological violence, social and economic deprivation as well as physical violence, they are less likely to be able to negotiate safer sex or condom use, or prevent their husbands or partners from having other sexual relationship, thus increasing their risk of acquiring infection (13). Women are also deprived of access to information and services due to their low status in society and cultural factors that expect women to be ignorant about sexual health (13).

Prevention against HIV/AIDS has been focused on the ABC (Abstain, be faithful, condom) approach. This approach does not address the need of large number of women at risk of HIV infection. It has limited use for most of the women due to the gender inequalities, Women are not in a position to negotiate abstinence from sex, insisting their partners to remain faithful or use condoms (12).

Rationale of the study

Women especially married women are at increased risk of HIV infection world wide. Factors that predispose women to HIV are complex. Data regarding married women and HIV are lacking in this country. In Ethiopia where women with HIV infection outnumber men, in which socioeconomic and education status of women is low and deep rooted harmful traditional and cultural factors are prevalent, identifying factors that predispose married women to HIV and ways by which women can prevent risks is very important in order to help women control risks and thereby protect themselves.

2. Literature review

2.1 Women and HIV/AIDS

2.2 Why are women more vulnerable to HIV infection?

Biological factor

Women are more susceptible to HIV infection due to various biological factors. Some of the reasons are greater exposed surface area, more viruses in sperm than vaginal secretion and the presence of asymptomatic sexually transmitted infection in women (untreated STIs). Moreover, since women are receptive partners there is a chance the semen stays for longer period and has easy access to micro lesions which increases vulnerability of women (7, 8, and 9).

Economic factor

Lack of access to formal education and training leads to women's unemployment, unequal payment and low status in the society. In addition women have the heavy burden of unpaid domestic work, child bearing and child care which limits their income earning activities. Because of the above reasons women most of the time depend financially on men (15). Therefore the degree to which they are able to exercise their right is often limited. Women can not control with whom and in what circumstances they have sex (12).

Women's vulnerability to HIV/AIDS is also affected by migration of men from their home to urban center to seek employment in which they form new sexual relationship and exposed to STD Including HIV. They often return home and end up infecting their wives, who are usually unaware of their husband's urban infidelity (9).

Cultural factor

In most cultures, virginity is highly valued among women while having multiple sexual partners is being equated with popularity and importance among young men (14).

Men are expected to have multiple partners while women are expected to be monogamous. In Botswana a tribal courts treat adultery as a female crime only suggesting that men are allowed to have multiple partners (2). For married men to have multiple partners is culturally accepted which predisposes women to HIV. Women are not expected to discuss or make decision about sexuality, request condom let alone insist on using condom. Women face abuses if they refuse sex (demand condom) for suspicion of infidelity (11, 13).

Sexual violence and marital rape

Sexual oppression combined with a high biological receptiveness of viral transmission put women at risk. According to Human Right Watch, One in three women around the world will be raped, beaten, coerced in to sex or other wise abused in her life time. In Uganda many women had been raped in marriage, unable to protect them selves from infection and were prevented from getting HIV/AIDS service because their husband physically attacked, threatened and intimidated them. Most women saw domestic violence as innate to marriage and viewed sex with their husbands as marital obligation. Traditional attitudes of the society which considers women as physical property of their husband deprive them of any rights over marital sexual relations. Violence or threat of violence prevents women's ability to consent to sex, negotiate safer sex and determining the number and spacing of their children (13).

Fearing violence or rejection, 58% of African girls avoid discussing condom use with their partners. Women in South Africa who are in relationship with violent men are 50% more likely to contract HIV than women not involved in abusive relationships.

Similar study in South Africa revealed that 30% of girls say their first intercourse was forced and 71% have experienced sex against their will (3). In some parts of Africa rape and sexual coercion of young girls who are assumed to be HIV negative are targeted because of the myth sex with a virgin cures AIDS. Coerced sex is risk factor for HIV infection due to increased abrasions (13).

Other forms of violence such as abandonment accompanied by physical violence may be Unbearable for women who are economically dependent. Their lack of economic autonomy limits their capacity to escape abusive relationships. Many believe the negative consequences of leaving the high risk relationship out weigh the possible out come of staying with an infected partner. This predisposes women to ignore their husbands' adultery and obey to their husbands demand for unprotected sex .Thereby exacerbating their vulnerability to violence and HIV infection. Women in Africa who seek to break violent marriage through divorce face enormous obstacles. In countries of Africa the divorce act imposes inequitable burden on women attempting to terminate their marriage. In Uganda, a woman cannot simply accuse her husband of adultery but must couple her claim with cruelty or desertion or polygamous and yet there is no such legal requirement for men (1, 13). This further exposes women to HIV infection.

Harmful Traditional practices

Harmful traditional practices have their origin in societies where the superiority of men over women promoted. Female genital mutilation is one of the most prevalent harmful traditional practices widely practiced in Africa (13, 16).

According to WHO between 100 and 140 million women and girls have undergone Female genital mutilation (FGM) and about two million more are added to that number each year.

FGM can predispose women to HIV through two means.

I. Unsterile instrument used for cutting

II. Chronic genital Injury, tears, ulceration, delayed healing of injuries and vulvas scar which leads to coerced sex and HIV.

In some parts of Africa “dry sex” is frequently practiced where by girls and women attempt to dry out their vaginas in an effort to provide more pleasurable sex to men. Dry sex cause tears and laceration which increase risk of HIV infection. Most of the time dry sex occurs in stable unions where the women are seeking to maintain the relationships (13).

Age /Early marriage/

In Sub Saharan African 75% of HIV positive young people are female. The peak age for HIV prevalence among women is around 25 which are ten to fifteen years younger than the peak age for men (12). Findings from EDHS 2005 showed that HIV prevalence among women 20-24 is over three times that of men in the same age group (4). In Uganda, the risk of HIV infection doubles for girls 15 – 19 who have male partners ten or more years older. The age of marriage is often lower for females than males and men are expected to have younger sexual partners. Customary laws and some common laws reinforce these expectations. Younger women whose genitals are immature, tender and break easily are at risk for HIV infection. Early marriage may promote respect of men’s autonomy in sexual matters and dictate sex as wife’s duty regardless of risk to herself. Marriage can be a major risk factor for women who are powerless to negotiate condom use or their husband extramarital behavior (2, 13).

Gender Inequalities

Stereotypical gender roles place women at risk of HIV infection. Women in many parts of the developing world have little control over how, when or where sex takes place. Women and girls are particularly vulnerable because of their lack of power over their sexuality and reproductive function (14).

Gender norms dictate that girls and women should remain poorly informed about sex and reproduction, men are expected to be more knowledgeable often as an indication of their sexual experience. Women risk their sexual health because they must appear to be ignorant and so cannot openly seek information (11).

Review of research conducted in seven countries showed that even where sexually active young women are aware of HIV/AIDS and measures to protect against infection, they rarely do have the power to ensure safe sex. Given unequal power with this relationship, it is frequently difficult for women to refuse sexual relations. Women suffer from subordination, discrimination and inequality under the law. Gender power inequities are believed to play a major role in the HIV epidemic through their effect on women's power in sexual relations. A Study conducted in Kenya showed that young women felt that they did not have control over their sexuality instead girls learned that sex was something that happened to them (14).

Lack of knowledge

Women have less access to information services and resources. Females' ignorance of sexual matters is often viewed as sign of purity or innocence while having too much knowledge about sex is a sign of virtue. Therefore being knowledgeable about sex would compromise the way other people views them (14).

This prevents women from seeking information or service related to sexual health. As a result many girls and women know little about their bodies, their sexual and reproductive health or HIV/AIDS. Millions of girls and women remain ignorant about HIV with severe consequences. In Bangladesh less than 20% of married women have heard of HIV/ AIDS (3). In sub-Saharan Africa only 20% of women were able to identify two prevention methods and the common misconception about HIV. Twenty six percent of girls 10-19 in Somalia have heard of AIDS, only 1% know how to protect themselves from the virus (3, 12). For many girls and women, knowledge is not enough. They need to learn not only how the disease is transmitted but also how to negotiate abstinence, unwanted sex or safer sexual relationship and they need to find ways to financially support themselves. Because women have less access to resource, more likely to be economically dependent on men and less likely to be able to negotiate methods of protection. Many women especially married may practice unsafe sex in order to preserve relationships (17).

High risk sexual behavior

Rates of HIV infection among married women or those in committed partnerships are increasing rapidly. In sub-Saharan Africa, where women have been hardest hit by the AIDS pandemic, 57% of those who test positive are women and at least one third of these women were married(18). Marriage and long term, monogamous relationships do not protect women from HIV. In Cambodia studies revealed that 13% of urban and 10% of rural men reported having sex with both a sex worker and their wife. Another study in Thailand showed that 75% of HIV infected women are likely to be infected by their husband (12).

A number of studies in Africa indicate that married women are at higher risk of HIV infection than their unmarried counterparts. Studies conducted among VCT clients in Addis Ababa showed that ever married clients are more likely to be HIV positive than never married ones. HIV prevalence among currently married women was 30.9 % while for never married clients was 17.6% (19). In Zambia 27% of married girls were HIV positive compared to 16% of unmarried girls (20). In another study 50% of Senegalese women living with HIV/AIDS have only one risk factor: living in monogamous union (21).

Absence of female controlled prevention / Barrier to prevention/

For women to protect themselves from HIV infection skills, attitudes and behaviors of their own isn't enough. They should convince their partners about safer sexual practices. Gender, Culture and power may be barriers to maintain safer sex practice with primary partner. Majority of women cannot protect themselves against AIDS because they have to rely on their male partner who may decide whether or not to use condom and be faithful. With less ability to control sexual encounter and increase physiological susceptibility to HIV, many women are finding that commonly accepted methods of prevention Abstinence, Be faithful and condom use(ABC) are difficult to apply(12, 17) .

Faithfulness offers little protection to wives whose husbands have several partners or were infected before they were married. Condoms require the cooperation of the husband who may refuse to use them. More over, married couples don't use condoms either because they want to have children or condoms would indicate a lack of trust (17). The vast majority of married women at risk aren't using any barrier method during sex. According to UNAIDS, only 4.9% of married women world wide use condoms including only 1.3% in Sub-Saharan Africa (18).

3. Objectives

3.1 General Objectives

To assess factors associated with acquiring HIV among VCT service seeking married women at four health institutions in Addis Ababa.

3.2 Specific Objectives

To determine the prevalence of HIV among VCT seeking married women

To identify factors associated with HIV acquisition among VCT seeking

Married women

4. Material and methods

4.1 Study Area

In Addis Ababa, there were 118 VCT centers. Thirty one of them were governmental. From this health institutions Zewditu Hospital, Kazanchis Health Center, Bethezata Higher Clinic (Sarbet) and Organization of social services for AIDS (OSSA) were selected to conduct the study. Selection of the VCT centers was based on the availability of adequate clients. Data collected from the selected institutions showed that each of these Institutions conduct VCT on 50-100 married women per month.

4.2 Study Design

The study design was a Cross sectional descriptive study.

4.3 study population

4.3.1 Source population – All women who came for VCT to the selected health institutions.

4.3.2 Study population – women who were currently married or living with regular partner for at least one year and who came for VCT services in the selected health institutions.

Inclusion criteria

Women who were currently married and those living together with regular partner at least for one year.

Married women who were volunteer to participate in the study.

Exclusion criteria

Married women who were unable to communicate for different reasons.

4.4 Sample size

Sample size determination was done using the sample size formula for Single Proportion of Cross Sectional Studies. The following assumptions were considered: Taking the proportion of HIV among married women to be 30%, 95% level of significance and allowing a maximum difference of 4% and 20% non response rate, the total sample size was 604.

$$N = \frac{(Z_{\alpha/2})^2 Pq}{D^2}$$

$$Z_{\alpha/2} = \text{Critical value} = 1.96$$

$$P = .30$$

$$q = .70$$

$$d = .04$$

$$N = \frac{(1.96)^2 \times .30 \times .70}{(.04)^2}$$

$$N = 504 + 100 = 604$$

4.5 Sampling procedure

The study subjects were married women who came for VCT services in Zewditu hospital, Kazanchis health center, Bethezata Higher clinic (Sarbet) and OSSA (Lideta). All eligible married women from the selected VCT centers were included.

4.6 Data collection procedure

Data was collected from study subjects using a structured questionnaire. The questionnaire was pre tested in Gandhi Memorial hospital which was not selected as a study area to sort out any problems that can arise during data collection process. Nurse counselors working in the VCT centers were recruited for data collection. Data collectors were trained on the technique of interview, appropriate recording and the need of confidentiality by the principal investigator for half day. Informed consent was obtained from each study subject after explanation of the study. Data collectors filled the questionnaire after pretest counseling. Study subjects had codes on their questionnaire. At the end of the day counselors linked the codes with the HIV test result. All questionnaires were checked for completeness at the end of the day by the principal investigator.

4.7 Data entry and Analysis

Data was entered and cleaned using EPI Info version 6 and SPSS version 11 statistical package was used for analysis. Proportion, P values, Odds ratio and logistic regression were used for analysis as appropriate.

4.8 Variables

4.8.1 Dependent variable

HIV Status among VCT users married women

4.8.2 Independent variable

- Age
- Income
- Education
- Premarital HIV test
- Marital condition
- Duration of marriage
- Number of marriage
- Discussion of sexuality
- Partner work place
- Alcohol use
- Chat
- Drug use
- Risk perception
- Violence
- Decision making power

5. Operational Definition

Married ---- those married legally and women living together with regular partner for at least one year.

Decision making power --- free actions related to sexuality

Gender ----- is a term used to describe differences between men and women which are socially determined.

Gender based violence --- is an act of violence that results in, or likely to result in, physical, sexual, or psychological harm or suffering to women, whether occurring in public or private life.

Physical Violence ---- any form of violent act which can result in physical harm including Slapping, Pushing, shoving, kicking, choking or burning, threatening with gun, knife or other weapon.

Emotional Violence--- any form of violence which can result in Psychological harm including Insulting, humiliating, Intimidating and threatening.

Sexual violence--- Includes Rape and degrading sexual acts.

5. Ethical consideration

Ethical Clearance was obtained from Addis Ababa University, and permission to conduct the study in the study area was secured from the respective authorities. Informed consent from each study subject was obtained after clear explanation about the purpose of the study. Nurse counselors working at the VCT centers filled the questionnaire after pretest counseling. Each study subject was given a code that was filled on the questionnaire. At the end of the day the counselors linked the codes with the HIV test result. The principal investigator didn't have any direct contact with the clients. Confidentiality of the information was assured by omitting names of the subjects from the questionnaire. Maximum effort was made to maintain confidentiality by using nurse counselors working in the selected study area. Study subjects who were not willing to participate had the right to do so or not to respond to questions that they were not willing to answer.

7. Results

Socio demographic characteristics of married women

A total of 602 of married women were interviewed from October to December 2006. The overall response rate was 99.6%. Only 2 married women who came to confirm a positive result were excluded from the study.

The majority 443 (73.5%) were below the age group of 35 years. The most common ethnic group was Amhara 332(55.1%) followed by Oromo comprising 118 (19.6%).

Five hundred fifty six (92.4%) of the respondents were Christian by religion while 44(7.3%) of them were Muslims.

The majority of the respondent 338 (56.2 %) attended secondary and above education. Ninety seven (16.1%) of the respondents had no formal education. Three hundred forty seven (57.8%) were housewives. Majority of the respondents had no income of their own. One hundred twenty nine (60.2 %) of the respondents earn less than 600birr. Majority of these women who had income of their own claims that the income was not adequate to satisfy their needs unless their husbands' income is added.

Regarding educational status of their husband 436 (72.2%) attended secondary and above. About 507 (84%) had regular income of which 200 (39.4%) earn \geq 1000birr. Majority of the respondent 326 (54%) believed their total income was not adequate. (Table 1)

Table 1 – Socio demographic characteristics of VCT seeking married women at health Institutions in Addis Ababa / Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Age		
15-19	21	3.5 %
20-24	229	38 %
25-34	193	32.1%
35-44	123	20.4 %
> 44	36	6.0 %
Ethnicity		
Amhara	332	55.1 %
Oromo	118	19.6 %
Guragie	93	15.4 %
Tigray	50	8.3 %
Others	9	1.5 %
Religion		
Christian	556	92.4 %
Muslim	44	7.3 %
Others	2	.3 %
Education		
No formal education	96	15.9 %
Primary education	168	27.9 %
Secondary and above	338	56.2 %
Occupation		
House wife	347	57.8 %
Private business	110	18.2 %
Government employee	70	11.6 %
Non Government employee	40	6.6
Others	35	5.8 %
Income of respondent (n= 214)		

≤ 200	57	26.6 %
201- 599	72	33.6 %
600-999	40	18.7 %
≥ 1000	45	21.1 %

Prevalence of HIV infection and reasons for VCT seeking

From the total respondents 150 (24.9%) women were tested HIV positive and 452 (75.1%) were tested HIV negative on the date of the interview. The prevalence of HIV was 23 (15.2%), 87 (29.8%) and 40 (25.2%) for the age group < 25, 25-34 and ≥ 35 respectively.

The main reason given for seeking VCT service was 204 (33.9%) perceive their husband had high risk sexual behavior followed by 186 (30.9%) who wanted to know their status and 72 (12%) who perceived risk as a result of contamination of fluid and blood during caring of sick relatives, at health institutions and due to their occupation. Fifty seven (9.5%) of the respondents sought the service either because of their own illness or illness of their husband. of the total respondents, only 38 (6.3%), 36 (6%) and 17 (2.8%) came to the VCT centers for Visa, ANC and respondent risk respectively.

Marital characteristics

From the total respondents 531(88.2%) were married and 71(11.8%) were living together for at least one year. Majority of the respondents 393 (65.4%) stayed in marriage for 1-9years. Five hundred eight women (84.4%) married only once. Seventy two (12 %) of the women were forced to marry without their willingness mainly by family influence 57 (79.2%). (Table 2)

Table -2 Frequency distribution of the marital situation among VCT seeking married women at health institutions in Addis Ababa / Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Marital condition		
Married	531	88.2%
Living together	71	11.8%
Duration of marriage		
0-9	393	65.4%
10-19	140	23.3%
≥ 20	68	11.3%
Number of marriage		
One	508	84.4%
≥ 1	94	15.6%

Willingness of**Marriage**

Yes	530	88%
No	72	12%

Sexual experience of married couples and Vulnerability to HIV

Two hundred fifty six (42.5%) of the respondents admitted that they had premarital sex while three hundred forty six (57.5 %) denied having premarital sex. Only 50 (19.5%) of those who had premarital sex used condoms during premarital sex. Majority of respondents 450 (74.8%) had no premarital test for HIV. The most common reason for not having premarital test was low knowledge at the time 276 (61.3%) followed by low risk perception 114 (25.3%).

Twenty one (3.5%) of the respondents reported ever extramarital sexual relationship. Out of them 12 (57%) of the relationships were within the last 12months and only 7 (33.3%) of them used condoms consistently. Three hundred ninety (64.9%) and 110(18.3%) of the respondents reported that their husbands had premarital and extramarital sexual relationship respectively. Regarding substance use 267 (44.4%) of the respondents husband used alcohol. Sixty five (24.3%) of them drink everyday and 35 (13.1%) of them ever got drunk. Chat is also consumed by 141 (23.4%) of the respondent's husband. (Table 3)

Table 3 – Frequency distribution of vulnerability to HIV among VCT seeking married women at health institutions in Addis Ababa / Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Premarital HIV test		
Yes	152	25.2 %
No	450	74.8 %
Reasons for no Premarital test		
No Knowledge	276	61.3 %
Feel not at risk	114	25.3 %
Trust of partner	67	14.9 %
Husband not Volunteer	35	7.8 %
Others	41	9.07 %
Condom use		
Yes	50	19.5 %
No	206	50.5 %
Extramarital sex		
Respondent		
Yes	21	3.5 %
No	581	96.5 %
Condom use		
All times		
Yes	7	33.3 %
No	14	66.7 %
Premarital Sex (Husband)		
Yes	390	80.9 %
No	92	19.1%

Alcohol use

Yes	267	44.4 %
No	335	55.6 %

Chat use

Yes	141	23.4 %
No	461	76.6 %

Sexual discussion and women's decision making power regarding sexuality

Majority of the respondents 347 (57.6%) had practice of discussing on sex. Most of the discussions were initiated by both couples 138 (39.8%) while 114 (32.7%) were initiated only by the husband. Of the total 349 respondents who had practice of discussing sex issues, 80 (23.1%) had conflict during the time of discussion while 39 (48.8%) reached at agreement usually.

About 419 (69.4 %) of the total respondents believe that married women could refuse sex if they didn't want to have sex with their husbands while 173 (29.2%) of the respondents said married women couldn't say no sex to their husband. The most Important reason given by the respondents as to why married women couldn't say no to sex when they did not want to was marital obligation 81(46.6%), not to be suspected as infidel 67 (38.5%), fear of physical violence 47 (27 %) and 42 (24.1%) depend on their husband for their income. About 84% of the respondents discuss about faithfulness in marriage. Four hundred eighteen (69.4%) of the respondents believe that they can make decision regarding their sexuality. (Table 4)

Table 4 – Frequency distribution of sexual discussion and decision power regarding sexuality among VCT seeking married women at health institutions in Addis Ababa

/ Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Discussion of sexuality		
Yes	347	57.6%
No	255	42.4%
Refused sex		
When they don't want		
Yes	419	69.4%
No	173	29.2%
I don't know	10	1.7 %
Reasons for those		
Unable to say no to sex		
Marital obligation	81	46.6%
Not to be suspected by		
Infidelity	67	38.5%
Fear of Physical abuse	47	27 %
Depend on the husband	42	24.1%
For Income		
Others	21	12.1%
Discuss faithfulness		
In marriage		
Yes	503	83.6%
No	99	16.4%
Decision making		

Regarding sexuality

Yes	418	69.4%
No	184	30.6%

Reason for not**Making decision**

No right for women	47	25.3%
Culture	53	28.5%
Afraid	104	55.9%
Others	21	11.3%

Risk perception to HIV

Majority of the respondents 446 (79.5%) perceived risk of HIV. The major reason given for risk perception was not sure of their own and partner sero status before marriage 166(37.2%) followed by the extramarital sexual relationship of their husband 149 (33.4%).

Regarding condom use among those who perceived risk to HIV because of their husband's high risk sexual behavior, illness of partner and unknown serostatus before marriage, only 101 (31.1%) of the women requested condom use. Majority of the respondents husband 56 (55.4%) were not volunteered to use condom while 45(44.6%) of them was volunteer to use condoms. The main reason given for not requesting condom while at risk was fear of the consequence such as physical violence, divorce 126 (56.2%) and fear that their husbands might consider them as unfaithful 76 (33.9%) but 12 (5.4%) of them did not ask because they believed condom decreases sexual pleasure.

Four hundred eighty seven (80.9%) of the couples discussed on VCT, however, 276 (45.8%) of the respondents didn't inform their husband about going to VCT. Majority of the respondents 535 (88.9%) planned to share the result even if the test result became positive.

The major reason for those who did not want to share the test result was fear that their husband might blame them of acquiring the disease 30 (69.8%) followed by fear of divorce 11 (25.6%) and discrimination 5 (11.6%). (Table5)

Table 5 – Frequency distribution of Risk perception among VCT seeking married women at health institutions in Addis Ababa / Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Risk perception		
Yes	446	74.1%
No	115	19.1%
Don't know	41	6.8%
Perceived risk		
Factors		
Not sure of previous Serostatus	166	37.2%
Extramarital sex (husband)	149	33.4%
Not trust her husband	70	15.7%
Contamination at health Institutions	44	9.8%
Caring of sick	30	6.7%
Husband sign of disease	23	5.2%
Sign of disease	18	4.0%
Extramarital sex (wife)	17	3.8%
Others	53	9.9%
Request		
Condom use		
Yes	125	28.2%
No	319	71.8%
Request of condom		

B/c husband risk		
Yes	101	31.1%
No	224	68.9%
Partner Response		
For condom request		
Volunteer	45	44.6%
Not volunteer	56	55.4%
Reasons for not		
Requesting condom use		
Fear of the consequence	126	56.2%
Might be considered as		
Unfaithful	76	33.9%
Decreases pleasure	12	5.4%
Others	86	27%
Discuss VCT		
Yes	487	80.9%
No	115	19.1%
Reasons for not		
Discussing VCT		
Not at risk	28	24.3%
Husband not		
Volunteer	47	40.9%
Sign of unfaithful	42	36.5%
Others	12	10.4%
Inform your husband		
About VCT		
Yes	326	54.2%
No	276	45.8%
Sharing test		
Result		
Yes	535	88.9%

No	45	7.5%
Undecided	22	3.6 %

Physical, Psychological and Sexual violence

From the total respondents 231(38.2%) women reported violence by their husbands. Majority of the respondents were abused emotionally 194(32.2%) followed by physical 161(26.7%) and sexual violence 66 (11%) during marriage. of those women who were physically abused 119 (73.9%) physically assaulted at least once in the last 12months. About 160 (82.5%) and 56 (84.8%) of the participants reported that they experienced at least one form of emotional and sexual violence in the last 12months. (Table 6)

Table 6 – Frequency distribution of Violence among VCT seeking married women at health institutions in Addis Ababa/ Oct -Dec, 2006/ n= 602

Characteristics	Frequency	Percent
Physical violence		
Yes	161	26.7%
No	441	73.3%
Physical violence last year		
Yes	119	73.9%
No	42	26.1%
Emotional Violence		
Yes	194	32.2%

No	408	67.8%
Emotional Violence last year		
Yes	160	82.5%
No	34	17.5%
Sexual Violence		
Yes	66	11%
No	536	89 %
Sexual Violence last year		
Yes	56	84.8%
No	10	15.2%

Women who were in the age group 25-34 were more likely to have HIV when compared with those women below the age of 25 with (OR= 1.871, 95% CI: 1.057, 3.309) and (AOR = 2.084, 95%CI: 1.195, 3.636). Those women with no formal education and primary education were at increased risk of HIV when compared with those women who attended secondary education and above with (OR= 2.141, 95%CI: 1.293, 3.544) and (OR= 2.028, 95%CI: 1.329, 3.096) respectively. (Table 7)

Table -7 Association of Respondent Socio demographic characteristic Vs HIV status among VCT seeking married women at health institutions in Addis Ababa

/ Oct -Dec, 2006/

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Age group				
15-24	23(15.2%)	128(84.8%)	1	
25-34	87(29.8%)	205(70.2%)	1.871(1.057, 3.309)	2.084(1.195, 3.636)
≥ 35	40(25.2%)	119(74.8%)	2.362(1.419, 3.932)	1.274(.666, 2.440)
Education				
No formal education	32(33.3 %)	64(66.7 %)	2.141(1.293, 3.544)	1.357(.710, 2.592)
Primary education	54(32.1%)	114(67.9%)	2.028(1.329, 3.096)	1.545(.975, 2.450)
Secondary & above	64(18.9%)	274(81.1%)	1	
Occupation				
House wife	97(28.4%)	250(72.0 %)	1.479(1.009, 2.168)	1.047(.659, 1.665)
Has Job	53(20.8%)	202(79.2%)	1	

Income				
Yes	42(19.6%)	172(80.4%)	.633(.423, .948)	.854(.423, 1.722)
No	108(27.8%)	280(72.2%)	1	
Income in Birr				
≤ 200	18(32.1%)	39(68.4%)	6.462(1.765, 23.653)	4.704(.943, 23.477)
201- 599	15(20.8%)	57(79.2%)	3.684 (1.002, 13.547)	2.547(.617, 10.524)
600-999	6(15%)	34(85%)	2.471(.575, 10.615)	2.331(.506, 10.736)
≥ 1000	3(6.7%)	42 (93.3%)	1	

Those women whose husbands' income was less than 1000 had higher chance of acquiring HIV than those women whose husbands earn ≥ 1000 . Women whose husbands work place out of Addis Ababa were more likely to be negative when compared with those women whose husbands work place was in Addis Ababa (OR= .580, 95%CI: .382, .882) and (AOR= .545, 95%CI: .343, .866).(Table 8)

Table -8 Association of Respondent Husband Socio demographic characteristic Vs HIV status among VCT seeking married women at health institutions in Addis Ababa/ Oct - Dec, 2006/

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Husband education				
No formal education	10(26.3%)	28(73.7%)	1.274(.598, 2.717)	.460(.185, 1.144)
Primary education	45(34.6%)	85(65.4%)	1.889(1.233, 2.895)	1.001(.597, 1.678)
Secondary & above	95(21.9%)	339(78.1%)	1	
Husband income in birr				

≤ 200	20(24.7%)	61(75.3%)	2.194(1.143, 4.211)	2.376(1.279, 4.415)
201- 599	48(39.3%)	74(60.7%)	4.341(2.506, 7.519)	4.120(2.196, 7.729)
600-999	26(25.5%)	76(74.5%)	2.289(1.248, 4.200)	2.235(1.149, 4.345)
≥ 1000	26(13%)	174(87%)	1	
Work place				
Addis Ababa	105(22.5%)	362(77.5%)	.580(.382, .882)	.545(.343, .866)
Outside Addis Ababa	45(33.3%)	90(66.7%)	1	
Total Income				
Yes	47(17%)	229(83%)	.444(.300, .657)	.643(.047, 1.016)
No	103(31.6%)	223(68.4%)	1	

The odds of having HIV were two times higher among married women than women living together (OR=2.184, 95%CI: 1.089, 4.381). The chance of having HIV was lower among women who married once than married more than once (OR=.581, 95%CI: .362, .934). The odds of HIV were high among women who had premarital sex when compared with those who had not premarital sex (OR=1.552, 95%CI: 1.071, 2.250).

Women who had premarital test for HIV were less likely to have HIV when compared with those who had no premarital test (OR=.300, 95%CI: .174, .517) and (AOR=.491, 95%CI: .270, .890). Those women whose husbands had premarital sex had a higher chance of being positive when compared with those women whose husbands had no premarital sex (OR=2.424, 95%CI: 1.269, 4.629). The odds of having HIV were also high among women who reported extramarital sexual relationship of their husbands (OR=2.022, 95%CI: 1.248, 3.277). (Table 9)

Table -9 Association of marital characteristics Vs HIV status among VCT seeking married women at health institutions in Addis Ababa/ Oct -Dec, 2006/

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Marital condition				
Married	140(26.4%)	390(73.6%)	2.184(1.089, 4.381)	1.872(.865, 4.052)
Living together	10(14.1%)	62(85.9%)	1	
Number of marriage				
One	117(23.1%)	390(76.9%)	.581(.362, .934)	.830(.482, 1.432)
> 1	32(34%)	62(66%)	1	
Premarital test				
Yes	17(11.2%)	135(88.8%)	.300(.174, .517)	.491(.270, .890)
No	133(29.6%)	317(70.4%)	1	

Premarital sex of the**Respondent**

Yes	76(29.7%)	180(70.3%)	1.552(1.071, 2.250)	1.408(.895, 2.216)
No	74(21.4%)	272(78.6%)	1	

Premarital sex of**The husband**

Yes	104(26.7%)	286(73.3%)	2.424 (1.269, 4.629)	3.931(.827, 18.688)
No	12(13%)	80(87%)	1	

Extramarital sex of the husband

Yes	36(32.7%)	74(67.3%)	2.022(1.248, 3.277)	1.038(.576, 1.869)
I think so	22(32.8%)	45(67.2%)	2.032(1.140, 3.623)	1.185(.600, 2.338)
No	64(19.4%)	266(80.1%)	1	

Women whose husband drink alcohol were more likely to be HIV positive (OR= 1.740 95%CI: 1.200, 2.525) than those women whose husbands did not use alcohol. HIV was also high among women whose husbands got drunk ever than those who do not get drunk (OR=2.426, 95%CI: 1.179, 4.996). Chat was not statistically significant in this study. (Table 10)

Table -10 Association of alcohol use Vs HIV status among VCT seeking married women at health institutions in Addis Ababa / Oct -Dec, 2006/

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Alcohol use				

Yes	82(30.7%)	185(69.3%)	1.740(1.200, 2.525)	1.418(.932, 2.157)
No	68(20.3%)	267(79.7%)	1	
Drunk with alcohol				
Yes	17(48.6%)	18(51.4%)	2.426(1.179, 4.996)	1.685(.698, 4.069)
No	65(28%)	167(72.4%)	1	

Women who discuss on sexuality with their husbands were less likely to have HIV when compared to those women who had no practice of discussion on sexuality (OR=.369, 95%CI: .253 .540) and (AOR=.535, 95%CI: .343, .835). Those women who believe they could say no to sex to their husband when they did not want had less chance of being HIV positive (OR=.535, 95%CI: .361, .792) than those unable to say no to sex to their husbands.

The odds of having HIV for those who discuss faithfulness in marriage were less likely (OR=.573, 95%CI: .360, .911) when compared with those who did not discuss faithfulness in marriage. Women who believe they could make decision regarding sexuality were less likely to be HIV positive (OR=.525, 95%CI: .357, .772) when compared with those unable to make decision. (Table 11)

Table -11 Association of selected variables regarding sexuality and decision making Power Vs HIV status among VCT seeking married women at health institutions in Addis Ababa/ Oct -Dec, 2006/

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Discussion of sexuality				
Yes	59(17%)	288(83%)	.369(.253, .540)	.535(.343, .835)
No	91(35.7)	164(64.3)	1	
Faithfulness to Marriage				
Yes	116(23.1%)	387(76.9%)	.525(.357, .772)	.908(.542, 1.522)
No	34(34.3%)	65(65.7%)	1	

Refused sex

Yes	89(21.2%)	330(78.8%)	.535(.361 .792)	.792(.508, 1.235)
No	58(33.5%)	115(66.5%)	1	

Decision making**In regard to sexuality**

Yes	88(21.1%)	330(78.9%)	.525(.357, .772)	.672(.345, 1.311)
No	62(33.7%)	122(66.3%)	1	

The odds of having HIV among those who perceived risk was higher (OR= 2.029, 95%CI: 1.177, 3.497) when compared with those who did not perceive risk. Those women who perceived risk because of the unknown sero status before marriage (AOR=2.693, 95%CI: 1.557, 4.659) and illness of self and partner had higher chance of having HIV (AOR=8.785, 95%CI: 2.727, 28.305) and (AOR=3.202, 95%CI: 1.239, 8.272). (Table 12)

Table -12 Association of Risk perception Vs HIV status among VCT seeking married women at health institutions in Addis Ababa

Variable	HIV status		Crude O.R (95% CI)	Adjusted OR (95% CI)
	Positive	Negative		
Risk Perception				
Yes	122(27.4%)	324(72.6%)	2.029(1.177, 3.497)	1.760(.958, 3.235)
No	18(15.7%)	97(84.3%)	1	
Perceived risk				
Extramarital sex of the respondent				
Yes	9(52.9)	8(47.1%)	3.146(1.185, 8.351)	2.954(.962, 9.071)
No	113(23.3%)	316(73.7%)	1	

Perceived risk				
Extramarital sex of the husband				
Yes	52(34.9%)	97(65.1%)	1.738(1.130, 2.674)	1.533(.874, 2.688)
No	70(23.6%)	227(76.4%)	1	
Perceived risk				
Unknown serostatus				
Yes	65(39.2%)	101(60.8%)	2.518(1.644, 3.856)	2.693(1.557, 4.659)
No	57(20.4%)	223(79.6%)	1	
Perceived risk				
Respondent illness				
Yes	13(72.2%)	5(27.8%)	7.609(2.652, 21.833)	8.785(2.727, 28.305)
No	109(25.5%)	319(74.5%)	1	
Perceived risk				
Husband illness				
Yes	11(47.8)	12(52.2%)	2.577(1.105, 6.006)	3.202(1.239, 8.272)
No	111(26.2%)	312(73.8%)	1	

Women who were abused emotionally were more likely to acquire HIV (OR= 1.708, 95%CI: 1.164, 2.505) when compared to women who were not abused emotionally. The odds of having HIV were higher among women who were sexually abused (OR=1.859, 95%CI: 1.084, 3.190) than those who were not abused.

Table -13 Association of Emotional, Physical and sexual Violence Vs HIV status among VCT seeking married women at health institutions in Addis Ababa/ Oct -Dec, 2006/

Variable	HIV status		Crude O.R	Adjusted OR
	Positive	Negative		

Emotional Violence		(95% CI)		(95% CI)	
Yes	62(32%)	132(68%)	1.708(1.164, 2.505)	1.088(.683, 1.732)	
No	88(21.6%)	320(78.4%)	1		
Emotional violence within 12 months					
Yes	51(31.9%)	109(68.1%)	1.636(1.099, 2.437)	.980(.604, 1.589)	
No	11(32.4%)	23(67.6%)	1		
Sexual Violence					
Yes	24(36.4%)	42(63.6%)	1.859(1.084, 3.190)	1.086(.576, 2.049)	
No	126(23.5%)	410(76.5%)	1		

8. Discussion

The result of the study showed that HIV prevalence is high among married women who seek VCT service. This finding is similar to a study conducted among VCT clients in Addis Ababa in 2005 which showed HIV prevalence was 30.9% among married women as compared to never married clients 17.6% (19). Similar studies in Kenya and Zambia showed that 30.9%, 27% of married girls were HIV positive compared to 22%, 16% of unmarried girls respectively (20). These results revealed that marriage did not protect women from HIV unlike the traditional attitude that said marriage is a protective factor. The study showed that different factors contribute to acquiring HIV among married women.

HIV prevalence found to be lower (15.2%) among clients below the age of 25 than age groups 25-34 and ≥ 35 . The age group 25-34 was mostly affected (29.8%). The odds of having HIV were two times higher among women above 25 when compared with the age group below 25. This is in line with the findings of EDHS 2005 which revealed HIV prevalence rises with age, peaking among women in their late 30s (4).

The chance of acquiring HIV was two times higher among uneducated or women with no formal education when compared with those of secondary education and above. This is also true in study conducted among VCT clients which showed there is decreasing pattern of HIV as education increases but inconsistent with the study of EDHS 2005 which showed HIV infection levels increases directly with education (4, 19). Women's education may provide access to information and hence the opportunity to protect themselves from HIV. Education may also enable women to be more assertive to negotiate safer sexual practices with spouses and partner.

Those who were house wives had more chance of acquiring HIV when compared with those who had Job. This is in line with the findings from VCT centers which showed employed clients had lower chance of being HIV positive than the unemployed ones but inconsistent with the study of EDHS 2005 which revealed employment is related to high HIV level (4, 19). It may be related to the fact that women who are housewives are likely to be uneducated and had no income of their own.

Women who had income of their own were less likely to have HIV when compared with those with no income. This might reflect the fact that women who are economically

dependent on men are unable to discuss sexual issue and negotiate safer sexual practices. Results from this study showed that as income increases there is less chance of acquiring HIV. This shows economic independency is crucial in preventing HIV among women.

Similarly better husband education was also related with less chance of HIV positive. Those women whose husbands had less income had higher chance of acquiring HIV when compared to those with higher income. This might be explained by the fact that men who had low income might be those who were less educated and had less information about safe sex which increases their chance of acquiring HIV and infecting their wives.

Women whose husband's work place was in Addis had less chance of having HIV when compared with those living outside of Addis. The same is true in study conducted in Tanzania which showed that women with partners who were mobile had a higher HIV prevalence. According to this study mobile men have been shown to report more sexual risk behaviors such as multiple partners, excess alcohol intake and sex with commercial sex workers which put them and their partners at risk of HIV (22).

Regarding marital situation the odds of HIV among married were two times higher than those living together. This might be attributed to the fact that married women were more likely not

to use condoms because they want to have children. Women that married once had lower chance of acquiring HIV than those married more than once.

Only 152(25.2%) of the respondent had premarital HIV test which indicates more effort should be done to increase awareness of the society in utilizing VCT as means of prevention of HIV among couples. Those women with premarital HIV test had less chance of acquiring HIV than those with no premarital test. A number of women 11.2% acquired HIV after being negative during premarital test. This showed that a significant number of women are exposed to HIV within marriage and attention should be given in bringing behavioral changes towards safer sexual practices within marriage.

The chance of having HIV was higher among women with premarital sexual experience and women who claimed whose husbands had premarital and extramarital sexual relationships. Eighteen percent of the respondent's husband had extramarital sexual relationship as reported by their spouse.

This is similar with the study in Zambia which showed 19% of married men had extramarital sexual relationship (23). Women who are economically dependent ignore their husband's extramarital sexual relationship and obey their husbands demand for unprotected sex. Many of them believe the negative consequences of leaving the high risk sexual relationship outweigh the possible outcome of staying with an infected partner. This is a difficult choice which most women face on daily basis. Extramarital sexual relationship of the respondent failed to show significant association. This might be due to the small number of respondents and under reporting of sexual behavior by the respondents.

The prevalence of alcohol use among the respondents husband was found to be 44.4%. The same is true in a study conducted among VCT clients in Addis Ababa which was 45%. Women whose husbands use alcohol had higher chance of becoming HIV positive than those women whose husbands did not drink alcohol, moreover, those who get drunk were two times higher of having HIV than those who did not get drunk. This is similar with the study conducted among VCT client in regard to substance abuse in Addis Ababa which showed the use of alcohol is associated with serum positivity (24). A Similar study in Tanzania also showed that alcohol use by a partner increased the risk of HIV by increasing the risk of unprotected sex and commercial sex (22); however, Chat use was not statistically significant in this study.

Women who discuss on sexuality, faithfulness to marriage and believe to have decision making power in regard to sexuality had less chance of acquiring HIV when compared with those women who were unable to discuss and had no power in decision making.

According to this study women who had no formal education and primary education were less likely to make decisions regarding sexuality. The odds of having HIV was less among those women who are able to refuse sex when they don't want when compared with these women unable to say no.

The chance of HIV was higher among women who perceive risk of HIV infection than those with no risk Perception. This might be explained by the fact that most women who perceive risk of HIV infection were those who had exposure to risk behaviors.

The major reason given for risk perception was husband's extramarital sex followed by no pretest before marriage. Women who perceive risk as a result of extramarital sex of their husband, no pretest before marriage and husband's or self sign of disease had higher chance of having HIV. Study in Zambia revealed that women who were aware that their partners had extramarital sexual relationship had the greatest risk for HIV (23). Among women who perceive risk of HIV infection as a result of husband's high risk sexual behavior, only 31% of women request condom use and only 44.6% of the respondent's husband volunteered to use condom. This is similar with the finding of EDHS that showed 42% of women said a woman would be justified in asking the man to use a condom if she knows her husband has sexually transmitted infections (4).

This study revealed that women are not in a position to protect themselves even when they know they are at risk. For women to protect themselves knowledge about risk factor, attitude and skill of their own is not enough but should depend on their husbands to decide whether or not to use condom and the ability to convince them.

There is no significant association between those who used condom and who did not use condom. This might be related to the fact that those who claim condom use were either already infected or may not use it consistently.

The main reason given by the women not requesting condom use despite their husband's risky behavior were fear that their husband might blame them of infidelity and fear of the consequences such as physical abuse and divorce. In most cultures women are not expected to discuss about sex let alone request condom use. Many women do not ask for safer sex for fear of a violent reaction or even abandonment by a man on whom they are totally dependent on survival. This showed that commonly accepted methods of prevention such as abstinence,

faithfulness or using condoms are not viable options for married women. The only option of married women to protect themselves from HIV is remaining faithful to their husbands and hoping that their husbands remain faithful to them.

Another important factor which predisposes married women to HIV was violence based on this study. The prevalence of physical, emotional and sexual violence was 26.7%, 32.2% and 11% respectively. This is similar with the study conducted in Gondar which showed the prevalence of physical and sexual violence were 32.2% and 19.2% respectively but very low when compared with the study conducted in butajira on intimate partner violence (25,26). This difference might be attributed to the area of the study where majority of the respondents attended secondary and above education compared to the women in Butajira where many of the women were illiterate and the definition of the violence in which the Butajira study considered the life time violence (25, 26).

Emotional and sexual violence were highly associated with acquiring HIV among married women. The odds of having HIV were higher among women who were emotionally and sexually abused. This is in line with the study conducted in South Africa that showed women who are in relationship with violent men are 50% more likely to contract HIV than women not involved in abusive relationships (2). This might be due to the fact that those women who are emotionally abused had low self esteem in which they found themselves unable to negotiate safer sex; moreover, women who are sexually abused can be at increased risk because rape is associated with coercion and abrasion which directly increases the risk of HIV infection.

Strength of the study

- The use of nurse counselors as a data collector improved the data quality.
- High response rate

Limitation of the study

- Since the study addresses a sensitive issue and too private, the respondents may not give the right information
- As cross sectional study, cause and effect cannot be established.

- Four institutions were selected to conduct the study based on the availability of adequate clients and findings might be difficult to generalize.

9. Conclusion

The study showed that married women are at increased risk of HIV infection. In general husband income, work place out of Addis, no premarital test, no discussion on sexuality, perceived risk factor as illness of self and partner are highly associated with being HIV positive among married women.

Recommendation

- Increasing awareness of premarital test and encouraging couples to use the service.
- Using gender sensitive approaches such as providing women with a female condom
- Encouraging sexual discussion between couples
- Providing training on communication about sex and skills to negotiate safer sexual practices
- Targeting married men and work with them on safer and healthy sexual practices.
- Discouraging cultural practices that encourage men's extramarital sexual relationship.
- Empowering women by improving educational and economical status
- Promote women's decision making at the house hold, community and national level by promoting women's leadership and participation.
- Improving policies to reduce gender inequalities by decreasing the gap in education improve women's access to economic resources, increase women's political participation and protect women from violence.

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HIV status ----- 1. Positive 2. Negative 3. non specific

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**Addis Ababa University Medical Faculty
Department of community Health**

A Questionnaire prepared to assess factors associated with acquiring HIV infection among married women in Addis Ababa

Site _____

Individual consent form

Introduction

My name is _____. I am interviewing all married women came for VCT about factors associated with HIV infection among married women. For this purpose certain questions that are thought to be important will be asked. you are kindly requested to respond to these questions. We want to assure you that your answers will be strictly kept secret. We will also do not keep a record of your name or address. You have the right to refuse participation at any time or not to respond to questions that you are not willing to answer however, your honest answer to these questions will help us to understand factors associated with HIV infection among married women. Thus once again assuring that your responses will be kept confidential, we request your keen participation in this study

Agree to participate _____ (continue)

Does not agree to participate _____ (discontinue)

Interviewer name _____ Signature _____

Date of Interview _____

Client code _____

Section I -Socio demographic and Economic characteristics of the respondent and spouse

101. Age in complete years	
102. Ethnic group	1. Oromo 2. Amhara 3. Tigrie 4. Guragie 5. Others (specify)
103. Religion	1. Orthodox 2. Catholic 3. Protestant 4. Muslim

	5.Others (Specify)
104. Educational level	1. Not able to read & write 2. Able to read & write 3. Grade 1-8 4. Grade 9-12 5. Grade 9-12 6. Grade 11-12 7. Diploma 8. Degree & above
105. Occupation	1. House wife 2. Government employee 3. Non government employee 4. Private business 5. Daily laborer 6. Others (specify)
106. Do you earn regular monthly Income?	1. Yes 2. No
107. How much you get monthly? (In birr)	
108. Do you think the income you earn is enough for your family without including your husband's income?	1.yes 2.NO
109. Whose Income covers the majority living expenses?	1. Mine 2. My husband's 3. Equal share 4. Other (specify)
110. Who in your family has control on how to spend the family income?	1.My husband 2.Mine 3.Both of us
111. Do you have children?	1. Yes 2. No-----skip to 201
112. How many children do you have?	

Section II -Socio demographic and Economic characteristics of the spouse

- 201.** What is your husband's educational level?
1. Not able to read & write
 2. Able to read & write
 3. Grade 1-8 4. Grade 9-12
 5. Grade 9-12 6. Grade 11-12
 7. Diploma 8. Degree & above
- 202.** What is your husband's occupation?
1. Has no job 2. Private business
 3. Government employee
 4. Non Government employee 6. Pension

5. Daily laborer 7. Other (specify)
203. Does your husband earn regular monthly Income? 1. Yes 2. No
204. What is the amount of Income earned by your husband every month (in Ethiopian birr)?
205. Where is your husband's work place? 1. Inside Addis Ababa – skip to 301
2. Out side Addis Ababa
206. How often does your husband usually be away from home for work or for any other reason? 1. At least once in a week
2. At least once in a month
3. At least once in three months
4. At least once in a six months
5. Occasionally
6. Never.

Section III - Marital situation of the respondents

301. How long is this marriage (Partnership)?	
302. Have you been married before?	1. Yes 2.No ----- skip to Q. 306
303. How old were you when you first get married?	
304. How old were you when you currently get married?	
305. How old was your husband when you get married?	

306. How old were you when you get married?	
307. How old was your husband when you get married?	
308. Have you been screened before marriage?	1. Yes 2. No
309. If yes , what was the result	1. Both negative 2. I was positive 3. my partner was positive 4. Both positive
310. If No, What was the reason for not screening before marriage?	1. I didn't know about screening at that time 2. I think we were not at risk 3. I trusted my husband 4. My husband was not volunteer 5. I didn't have money for screening 6. I did not know where to get the screening service 7. Others (specify)
311. Was this marriage occurred by your willingness?	1. Yes --- skip to 401 2. No

312. What was the motive?	1. Unintended pregnancy 2. To be supported financially 3. Academic failure 4. Family pressure 5. Abduction 6. rape 4. Other (specify)
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Section IV Vulnerability of married women to HIV infection

401. Have you had sexual Intercourse before you get married?	1. Yes 2. No----- skip to 403 3.No response
402. Have you used condom in all occasions?	1. Yes 2. No 3.No response
403. Have you ever had sexual affair other than your husband after you get married?	1. Yes 2. No----skip to 405 3. No response
404. Was this sexual affair within the last 12 months?	1. Yes 2. No 3. No response
405. Do you think your husband have premarital sex before you get married?	1. Yes 2. No 3. I don't know 4. I think so
406. Do you think your husband has/had extramarital sexual relationships ever since you have been married?	1. Yes 2. No..... skip to 411 3. I don't knowskip to 411 4. I think so
407. If yes, did you ask your husband about his extra marital affair?	1. Yes 2. No
408. Do you think your husband stopped his extra marital affair after the discussion?	1. Yes----skip to 411 2. No
409. Did your husband drink alcohol outside home?	1.Yes 2.No
410. How often your husband drink alcohol?	1. Every day or nearly every day 2. Once or twice a week 3. 1-3 times a month 4. Occasionally 5. Never
411. In the past 12 months, how often have you seen your husband drunk?	1. Most days 2.Weekly 3.Once in a month 4.Never
412. Did your husband use Chat?	

	1.Yes 2.No
413. How often your husband chew Chat?	1. Every day or nearly every day 2. Once or twice a week 3. 1-3 times a month 4. Occasionally 5. Never
414. Did your husband use Drug?	1.Yes 2.No
415. How often does/did your husband use drugs?	1. Every day or nearly every day 2. Once or twice a week 3. 1-3 times a month 4. Occasionally 5. Never 6. I don't know

V - Sexual discussion between married couples and women's power in decision making.

501. Do you communicate with your husband about sexual matters?	1.Yes 2.No-----Skip to 605
502. Who usually initiates discussion on sexual matters?	1. My husband 2. Myself 3.Both of us
503. Is there any disagreement with your husband when you discuss on sexual matters?	1.Yes 2.No-----Skip to 606
504. How frequently do you reach an agreement?	1. Usually 2. All times 3.Rarely 4.Not at all

protect from infection?	
605. If yes, what was the response of your husband?	<ol style="list-style-type: none"> 1. He was volunteer 2. Disappointed 3. Threatens me to terminate the relationship 4. Hits me 5. he said I am not faithful 6. does not want to use condom 7. Other (specify)
606. If no , why	<ol style="list-style-type: none"> 1. Fear to ask my husband 2. My husband will be disappointed 3. He may think I am unfaithful 4. Condom decreases sexual pleasure 5. fear of divorce 6. Other (specify)
607. Have you ever discussed with your husband about testing for HIV?	1. Yes 2.No
608. Does your husband know that you are being tested for HIV today?	1. Yes 2.No 3. I don't know
609. Would you disclose the test result to your husband if it is positive?	1. Yes 2.No 3.I am not sure

Section VII- Physical, Sexual and Psychological Violence among married women

701. Did your husband ever Insulted you or made you feel bad about yourself? 1. Yes 2. No

702 Has this Happened in the past 12 months? 1. YES 2. NO

703. How frequent it happens in the last 1. Once 2. Few times 3. Many times

12months?

704. How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times 4. none

705. Did your husband Belittled or humiliated you in front of other people 1. Yes 2. No

706. Has this Happened in the past 12 months? 1. YES 2. NO

707. How frequent it happens? 1. Once 2. Few times 3. Many times

708. How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times 4. None

709. Did your husband (partner) do things to scare or intimidate you on purpose? 1. Yes 2. No

710. Has this Happened in the past 12 months? 1. YES 2. NO

711. How frequent it happens? 1. Once 2. Few times 3. Many times

712. How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times

713. Did your husband threatened to hurt you or someone you care about? 1. Yes 2. No

714 Has this Happened in the past 12 months? 1. YES 2. NO

715. How frequent it happens? 1. Once 2. Few times 3. Many times

716. How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times

717. Have your husband ever slapped or thrown something at you that could hurt you? 1. YES 2. NO

718. Has this Happened in the past 12 months? 1. YES 2. NO

719. How frequent it happens? 1. Once 2. Few times 3. Many times

- 720.** How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times
- 721.** Have your husband ever pushed you or shoved you? 1. YES 2. NO
- 722.** Has this Happened in the past 12 months? 1. YES 2. NO
- 723.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 724.** How frequent it happens before the past 12 months? 1. Once 2. Few times 3. Many times
- 725.** Have your husband ever hit you with his fist or with something else that could hurt you? 1. YES 2. NO
- 726.** Has this Happened in the past 12 months? 1. YES 2. NO
- 727.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 728.** How frequent it happens before the past 12 months? 1. Once 2. Few times 3. Many times
- 729.** Have your husband ever kicked you, dragged you or beaten you up? 1. YES 2. NO
- 730.** Has this Happened in the past 12 months? 1. YES 2. NO
- 731.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 732.** How frequent it happens Before the past 12 months? 1. Once 2. Few times 3. Many times
- 733.** Have your husband ever choked you or burnt you on purpose? 1. YES 2. NO
- 734.** Has this Happened in the past 12 months? 1. YES 2. NO
- 735.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 736.** How frequent it happens before the past 12 months? 1. Once 2. Few times 3. Many times

- 737.** Have your husband threatened to use 1. YES 2. NO
or actually used a gun, knife or other
weapon against you?
- 738.** Has this Happened in the past 12 1. YES 2. NO
months?
- 739.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 740.** How frequent it happens before the 1. Once 2. Few times 3. Many times
past 12 months?
- 741.** Have your husband ever physically 1. YES 2. NO
forced you to have sexual intercourse with
you when you didn't want to?
- 742.** Has this Happened in the past 12 1. YES 2. NO
months?
- 743.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 744.** How frequent it happens before the 1. Once 2. Few times 3. Many times
past 12 months?
- 745.** Did he ever force you to do something 1. YES 2. NO
sexual that you found degrading or
humiliating?
- 746.** Has this Happened in the past 12 1. YES 2. NO
months?
- 747.** How frequent it happens? 1. Once 2. Few times 3. Many times
- 748.** How frequent it happens before the 1. Once 2. Few times 3. Many times
past 12 months?