

Factors Fuelling the Prevalence of HIV and Contributing for Regional Variations Findings from EDHS 2005

Ethiopian Society of Population Studies

**In-depth Analysis of the Ethiopian Demographic
and Health Survey 2005**

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
BCC	Behavioural Change Communication
BSS	Behavioural Surveillance Survey
CSA	Central Statistics Agency
EDHS	Ethiopian Demographic Health Survey
EPHA	Ethiopian Public Health Association
FP	Family Planning
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
MoH	Ministry of Health
MTCT	Mother-to-Child Transmission
PLWHA	People Living with HIV/AIDS
RHP	Reproductive Health Problems
RTI	Reproductive Tract Infection
SNNPR	Southern Nations, Nationalities and Peoples Region
SRH	Sexual Reproductive Health
SRHPs	Sexual Reproductive Health Problems
STDs	Sexually Transmitted Diseases
SRHSs	Sexual Reproductive Health Services
STIs	Sexually Transmitted Infections
TB	Tuberculosis
UN	United Nations
UNAIDS	United Nations Joint Program on HIV and AIDS
UNICEF	United Nations Children's Fund
VTC	Voluntary Test Centre
WHO	World Health Organization

Executive Summary

The HIV/AIDS pandemic has raked up the attention of the international community and various global and national organizations. Its doomsday scenario has swiftly evoked the making of countless efforts and the allocation of resources to hold back its fast prevalence and horrendous impacts. Notable organizations and related actions in this regard are the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment, the Millennium Development Goal (MDG, Goal 6) and the 2005 World Summit which gave emphasis on universal access to HIV prevention, treatment, care and support. Despite such mammoth efforts and resources put to use at global and national levels to mitigate the prevalence of HIV and reduce impacts of AIDS, little attention has so far been given to build up the knowledge-base on the significance of demographic, socio-economic, cultural and political factors in fuelling the prevalence of this pandemic.

Ethiopia is no doubt among Sub-Saharan African countries hard-hit by HIV/AIDS. Following the first detection of the virus in 1984, AIDS cases were reported in 1986. The national adult HIV prevalence rate was estimated at 0.2 percent in 1985 increasing to 3.2 percent in 1995 and reduced to 1.4 percent in 2005. A trend analysis carried out for the country from 1982-2005 shows a continuous gradual rise of HIV/AIDS prevalence rate until the late 1990s and then a steady decline in the years after 2000. Although this appears encouraging, there is no guarantee that such a trend will continue into the future.

According to the 2005 Ethiopian Demographic and Health Survey (EDHS 2005), determinant factors fuelling the prevalence of HIV among the population and wide variations in HIV prevalence exist across regions; highest in Gambella (6 percent) and Addis Ababa (4.7 percent). Many people often remain uninformed or misinformed about the nature of the disease and have little access to available precautionary and/or preventive measures while some people are likely to be well informed. Such differential accesses would certainly lead to variations in the rate of prevalence of the disease among population groups, rural and urban areas, as well as intra and inter-regions. Three regions and/or city administrations dominated by urban population (Addis Ababa, Harari and Dire Dawa) have HIV prevalence rates at least twice as much as the national average.

The national prevalence rate often masks variations in the rate at which the epidemic is prevailing and its ensuing consequences. Therefore, to fathom variations of this nature, a detailed analysis of existing data is required to generate empirical evidences to explain the fundamental basis of the prevalence and variations and their significances. This is particularly so because available but limited studies are more of descriptive, not analytical, and thus do not provide adequate statistics on the significance of the explaining factors and their

linking mechanisms to each other as well as to the prevalence of HIV. To that end, this in-depth analysis of the EDHS 2005 HIV/AIDS data is initiated by the United Nations Population Fund (UNFPA) with a view to a) explore the underlying demographic, socio-economic and cultural factors fuelling the prevalence of HIV, and b) further identify and explain factors contributing for variations of HIV prevalence among various regions in Ethiopia.

It is obvious that EDHS 2005 raw data set generated from a nationally representative survey of 14,070 women aged 15-49 and 6,033 men aged 15-59, is the main source of data for this in-depth analysis. In the households selected for this study, all women aged 15-49 and men aged 15-59 were eligible for interview and HIV testing. In addition, the HIV sample test carried out as part of the same survey is based on 5,840 women in the age group 15-49 and 5,305 men in the age group 15-59, in order to generate additional data on HIV prevalence.

After sorting out relevant data and checking for validity and reliability all data are weighted to be nationally representative (according to EDHS 2005 protocol) except where specifically stated. Bivariate and multivariate analyses are employed to obtain desirable outputs on knowledge, attitude and behaviour/practice (KABP). In other words, the relative importance of each demographic, socio-economic and cultural factors, spelt out in the analytical framework, on the response variables, namely the prevalence of HIV and the consequent variations of HIV among regions are evaluated and presented.

For HIV prevalence, some of the regions have small cases that make the outputs of multivariate analysis very sparse. Hence, concerning HIV prevalence, multivariate analysis is made separately for selected regions, namely Tigray, Amhara, Oromia, Gambella and Addis Ababa and all other regions are merged together and analyzed as "other regions."

An in-depth analysis of the EDHS 2005 came up with a number of empirical findings. As indicated elsewhere, three major factors – demographic, socio-economic and cultural – are decomposed into their component parts and the significances of each part in influencing KABP are measured. In the former case, age, sex and marital status are the three major background characteristics of the study population and the key empirical evidence exposed is the high level of knowledge of the respondents about the prevalence of HIV/AIDS regardless of their age and marital status.

Access to information coming through radio, television and newspapers carrying HIV/AIDS messages has been found significant in increasing the knowledge of the respondents. Knowledge of abstinence as a mechanism of HIV prevention seems to be higher among young women (48.2%) and men (61.7%) than their older counterparts even if this is very low given untamed sexual activities of the youth. Knowledge of HIV prevention through condom use is by far lower among the younger respondents

(24.3% for women and 44% for men) which might indicate that the elementary know-how of fighting the pandemic has not been brought to the attention of the Ethiopian youth.

Residential areas are also important in influencing the level of knowledge of the respondents about the spread of HIV and its prevention mechanisms; urban residents are better situated than the rural ones. For instance, women aged 15-49 and those who reside in urban areas are 2.65 times more likely aware of the use of condom as a method of HIV prevention than those women of the same age who reside in rural areas.

Considering region-wise variations, respondents in Somali and Afar regions are the most unaware of all regions about the use of condom as a means of HIV prevention. Furthermore, educated women and men (primary and above) have higher likelihood of awareness about HIV/AIDS than those women who have not been to school. Likewise, wealthier, informed and urban residents are negotiating with greater strength for safer sex than their counterparts. It is not surprising that most women with low decision-making autonomy have less likely involved in negotiating for safer sex than those with high decision-making autonomy, which uncovers the role of gender relations in spreading HIV infection. As a whole, women living in Afar, Somali, Benishangul Gumuz and Gambella regions have less likelihood of entering into safer sex negotiation than those women in Oromia although the latter are in turn weaker in negotiation than women in the rest of the regions.

As obvious as it appears, younger women and men have less misconception about HIV transmission and prevention methods than older women and men. These evidences point out the fact that the younger groups of the population appear to have better understanding and less misconception about the whole gamut of HIV/AIDS than their older counterparts. Contrary to this, early age of marriage for Ethiopians remains to be not only a socio-economic menace but also an avenue for the spread of HIV, though there are variations between urban and rural settings – urban women are better situated than rural women.

The analysis clearly demonstrates the extent to which men with frequent exposure to mass media more likely use condom as well as exhibit stronger tendencies for HIV testing than those with infrequent or no exposure to mass media. Education also has the same effect for men. Therefore, these two socio-economic variables have significant effect in shaping the behaviours of men.

On the basis of the empirical findings of the study, the following leading recommendations are made: directing future interventions to increase the attitude and behaviour of the people regarding HIV prevention; mounting concerted efforts to expand the reach of mass media carrying HIV/AIDS messages; enforcing relevant laws to make the minimum 18 years of legal age of marriage practical; directing educational campaigns to increase

the knowledge of the poor people, and strengthening existing programs and introducing new ones to reduce poverty; streamlining interventions to increase faithfulness to one uninfected partner; designing localized programmes and/or strategies to address prevailing regional variations with regard to HIV/AIDS; empowering women in order to elevate their decision-making autonomy in the households to enable them exercise safer sex; and calling for continuous interventions regarding information dissemination, education and communication as they play a major role in the prevention of HIV/AIDS.

1. Introduction

Much of the evidence on HIV/AIDS has generated an almost universal consensus that the AIDS epidemic is having an immense impact on the economies of hard-hit countries, hurting not only individuals, families and firms, but also significantly slowing economic growth and worsening poverty. There are evident pathways that HIV/AIDS undermines and hence increases vulnerability to future collapse of livelihoods. Such a fast prevalence and horrendous impact of the disease has created magnificent commitments at the global level through the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment, the Millennium Development Goal (MDG, Goal 6), the 2005 World Summit (which gave emphasis to universal access to HIV prevention, treatment, care and support), national governmental and non-governmental organizations, and the civil society. Despite such a consensus, efforts and resources invested at global and national levels to mitigate the prevalence of HIV and the impacts of the AIDS pandemic, little attention has so far been given to build up the knowledge-base on the significance of the demographic, socio-economic, cultural and political factors in fuelling the prevalence of this pandemic. Nevertheless, the roles of these factors vary across space and over time with the ultimate effect of perplexing the implementation of HIV mitigation interventions.

Ethiopia is one of the Sub-Saharan African countries hard-hit by HIV/AIDS in all its manifestations. The first HIV infections in Ethiopia were identified in 1984 and the first AIDS cases were reported in 1986. In 1985, the national adult HIV prevalence rate was estimated at 0.2 percent increasing to 3.2 percent in 1995 and reduced to 1.4 percent in 2005. The cumulative number of people living with HIV/AIDS is about 1.5 million, out of which about 96,000 are children below 15 (MoH, 2002). Trend analyses of national prevalence rate from 1982 - 2005 shows a continuing gradual rise until the late 1990s and then a steady decline in the years after 2000 (MoH, 2002; CSA, 2005).

HIV prevalence was higher among women (1.9 percent) than men (0.9 percent). With regard to sex differences HIV prevalence level rises with age both for men and women. Although AIDS cases are grossly underreported, AIDS cases for women peak in the late 30s and for men in their early 40s. Likewise, HIV prevalence is higher in urban (5.5 percent) than in rural populations (0.7 percent). Although, the risk of HIV infection among rural women (0.6 percent) and men (0.7 percent) was almost identical, urban women were more than three times as likely as urban men to be infected (7.7 percent versus 2.4 percent) (CSA, 2005).

Furthermore, the 2005 Ethiopian Demographic and Health Survey (EDHS) came up with wide variations in HIV prevalence across regions. Highest prevalence rates were reported in Gambella (6 percent) and Addis Ababa

(4.7 percent). Three regions and/or city administrations dominated by urban population (Addis Ababa, Harari and Dire Dawa) have HIV prevalence rates at least twice as much as the national average (CSA, 2005).

Many people often remain uninformed or misinformed about the nature of the disease and have little access to available precautionary and/or preventive measures. Such differential accesses would certainly lead to variations in the rate of prevalence of the disease among population groups, rural and urban areas, as well as intra and inter-regions. The national prevalence rate often masks variations in the rate at which the epidemic is prevailing and its ensuing consequences, a situation emanating from a dearth of reliable data which would have been used to design interventions in the form of national policies, strategic plans, and resource allocation on HIV/AIDS. Therefore, to fathom variations of this nature a thorough scrutiny is required in order to generate evidences to explain the fundamental basis of the regional variations *per se* in Ethiopia where data and researches on HIV/AIDS are limited and available ones only address specific issues like knowledge, attitude and socio-economic impact of HIV/AIDS. Factors explaining such regional variations have not yet been adequately identified and elaborated upon. On the other hand, limited studies are more of descriptive than analytical to provide adequate statistics on the significance of the explaining factors and their linking mechanisms to each other as well as to the prevalence of HIV.

This study has therefore been initiated by the United Nations Population Fund (UNFPA) with a view to a) explore the underlying demographic, socio-economic, and cultural factors fuelling the prevalence of HIV; and b) further identify and explain factors contributing for variations of HIV prevalence among regions.

2. Study Objectives

The overarching objective of this study is to identify and explain factors fuelling the prevalence of HIV on the one hand and to explore contributing factors towards variations of HIV prevalence among regions on the other. This objective would be further decomposed into the following relatively more specific objectives:

- To measure the level of influence of the demographic, cultural and socio-economic factors on the prevalence of HIV at national and regional levels;
- To analyze the demographic, cultural and socio-economic factors that create regional variations on HIV prevalence; and
- To identify priority areas in the fight against HIV/AIDS.

3. Data Sources and Methods of Analysis

3.1 Data Sources

The basic source of data in this study is the EDHS 2005. All data pertaining to HIV/AIDS are sorted out and an in-depth analysis was carried out pursuant to the tenets of the study. To supplement EDHS 2005 data, additional data are sought from secondary sources, mainly literature.

3.2 Methods of EDHS 2005 Data Analysis and Presentation

As indicated above, EDHS 2005 raw data set, a nationally representative survey of 14,070 women aged 15-49 and 6,033 men aged 15-59, is the main source of data for this in-depth analysis. In the households selected for the EDHS 2005, all women aged 15-49 and men aged 15-59 were eligible for interview and HIV testing, and hence the source of data on knowledge, attitude and behaviour/practice (KABP) about HIV/AIDS in the EDHS 2005. In addition, the HIV sample test carried out as part of the same survey was based on 5,840 women in the age group 15-49 and 5,305 men in the age group 15-59, in order to generate additional data on HIV prevalence. Specimens were taken from respondents after they had consented to be tested. Dried blood spots for HIV testing were collected from 87% of 6,589 eligible women (5,840) and 72% of the 7,333 eligible men (5,305). The protocol for HIV testing was approved by the Ethiopia Health Service Ethical Review Committee in Addis Ababa and ORC Macro Institutional Review Board in Calverton, Maryland. The procedure, the confidentiality of the data, and the fact that the test results would not be made available to the subjects were explained to the respondents.

After sorting out relevant data, validity and reliability of the data quality are checked. All estimates are weighed to be nationally representative (according to EDHS 2005 protocol) except where specifically stated. The two stage cluster sample design was taken into account when calculating confidence intervals and all chi-square statistics for the bivariate analysis. In fact, both bivariate and multivariate analyses were carried out using SPSS version 15.0 to obtain desirable outputs on KABP and the prevalence of HIV/AIDS. As in the EDHS 2005 report, descriptive statistics were used to examine the bivariate relationships between HIV KABP and background characteristics (demographic, socio-economic and cultural factors); to determine statistical significance χ^2 tests were used and associated P value ($P < 0.05$ statistically significant) were reported.

In the multivariate analysis, major examination was made regarding the nature and strength of association between the demographic, socio-economic and cultural factors and HIV KABP. Since all dependent variables with respect to HIV KABP and prevalence are dichotomous/binary, a logistic regression model was used. To facilitate interpretation, logistic coefficients were presented as Odds Ratio (OR). The OR gives an estimate of the magnitude of the association between the variables being compared. P values were calculated to identify

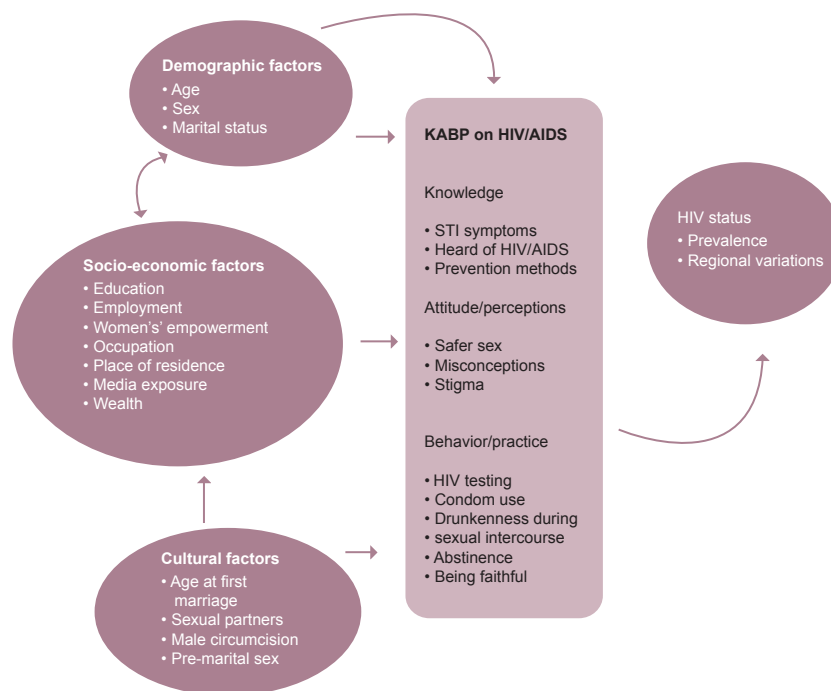
the associations that are statistically significant ($P < 0.05$ statistically significant). In other words, bivariate and multivariate analyses are employed to evaluate the relative importance of each explanatory factor on the response variables, namely the prevalence of HIV and the consequent variations of HIV among regions.

For HIV prevalence, some of the regions have small cases that make the outputs of multivariate analysis very sparse. Hence, concerning HIV prevalence multivariate analysis is made separately for selected regions, namely Tigray, Amhara, Oromia, Gambella and Addis Ababa and all other regions are merged together and analyzed as 'other regions.'

4. Analytical Framework

To examine factors explaining the prevalence of HIV at national and to regional levels and to further explore factors contributing to regional variations in the same, various sets of factors are assessed. Congruent with the objectives of the study and for the purpose of analysis, these factors are selected and grouped into three sets: demographic, socio-economic and cultural. The three selected set of factors, interrelationships among factors and their links to KABP and eventually the influence the KABP has on the prevalence as well as regional variations of HIV are contained in the schema shown below. As depicted in the schema, demographic or socio-economic factors have a two-way interaction while cultural factors influence socio-economic factors, but not the other way round. The three set of factors together influence KABP on HIV/AIDS, the prevalence of HIV, and create variations of HIV prevalence among regions. The analyses rested upon specific interrelationships and not a complete exposition of what is presented here in the framework.

Figure 1. Analytical framework



Source: Developed by the researcher, 2007.

5. Review of Related Literature on HIV/AIDS Prevalence and Variations

5.1 The Magnitude and Scale of HIV/AIDS Epidemic

The world and particularly developing countries have been exposed to health risks because they do not have adequate information, knowledge or guidance about RTI/STIs, HIV/AIDS, SRH and related problems (UNAIDS, 2004). Hence HIV/AIDS is a global problem and infects people all over the world, but certain regions have much higher infection rates. HIV/AIDS related deaths have claimed over 20 million lives over recent decades, and an estimated 40 million people are living with the virus around the world (Manjula et al., 2007). In such situations an ever-growing AIDS epidemic is inevitable. Experience shows that HIV/AIDS can devastate whole regions and threaten the social and economic well-being of any country and unless action against the epidemic is scaled up drastically the damage already done will seem minor compared with what lies ahead.

HIV/AIDS epidemics spreading through the countries of Sub-Saharan Africa are highly varied. Although it is not correct to speak of a single African epidemic, Africa is without doubt the region most affected by the virus. Inhabited by just over 12% of the world's population, Africa is estimated to have more than 60% of the HIV-infected population (UNAIDS, 2006).

World Bank (2004) reported that AIDS now exists in all regions of Ethiopia. The most recent estimates issued by the Ministry of Health (MoH) in 2005 put the number of people living with HIV/AIDS at 1.32 million, about 137,500 new AIDS cases, 128,900 new HIV infections (353 a day) including 30,300 HIV positive births, and 134,500 (368 a day) AIDS deaths (including 20,900 children less than 15 years). Furthermore, it is estimated that by 2010, Ethiopia would have between 7 to 10 million persons living with HIV/AIDS (MoH, 2006).

Although comparable data are lacking, the national prevalence rate invariably masks variation in the rate at which the epidemic is spreading among the regions and various population groups in the country. However, available prevalence estimates from 15 sentinel sites in six regions (Southern Nations and Nationalities People Region, Amhara, Dire Dawa, Gambella and Addis Ababa) reveal substantial variations in the rate. While the prevalence rate is only 0.7 % in Gambo (in Oromiya Region), it has reached 21% in Bahir Dar (in Amhara Region). The rate is less than 5% only in four sites (Attat, Hossana, Gambo and Metu), and above 10% in each of the other eleven sites (MoH, 2000).

It might be argued that regional variations probably occur as a result of variations with what scientists identified as three ways by which HIV infection spreads: sexual intercourse with an infected person, contact with contaminated blood, and transmission from an infected mother to her child before or during birth or

through breastfeeding. The possible ways to reduce the chance of getting HIV is only by having just one faithful sexual partner, using condom at every sexual encounter, and abstaining from sex (Encarta, 2006). Seen in a nutshell, the behavioural trends (2000 vs. 2005) from the EDHS 2005 among the general population reveal high level of awareness; decreases in the prevalence of premarital sex and multiple sexual partners and increases in condom use at high-risk sex. However, much remains to be done. The urban epidemic is at high prevalence level of 10.5%; prevalence of behavioural indicators such as condom use is not at optimal level (EDHS, 2005).

5.2 HIV/AIDS Related KABP

5.2.1 HIV/AIDS Related Knowledge

People's knowledge can influence their actions towards adopting risk-reduction behaviours such as abstinence, reduction in premarital sex, reduction in number of sexual partners, avoidance of non-spousal sex, and condom use during non-spousal sex. Knowledge is also an important pre-requisite for health-seeking behaviours, utilization of HIV prevention, care and support services as well as fighting stigma and discrimination against people living with HIV (MoH- Uganda, 2007).

Awareness on HIV/AIDS

On the other hand, lack of awareness and misconceptions by the public about HIV/AIDS might have contributed to the spread of the disease. In addition, lack of access to information, education and counselling about the disease also contribute to continued high-risk behaviours. To date, the only protection against infection with the disease is to modify behavioural patterns in order to minimize risk. Hence, information dissemination, education and communication continue to play a major role in the prevention of HIV/AIDS. Studies conducted in Ethiopia on knowledge, attitude and practice (KAP) on various target groups provided a baseline data on sexual behaviour, knowledge and attitude towards HIV/AIDS and the urgency of comprehensive health education as an intervention method (Mehret et al., 2002).

Knowledge about transmission

The three main transmission routes of HIV are sexual contact, exposure to infected body fluids or tissues and from mother to foetus or child during prenatal period. It is possible to find HIV in the saliva, tears, and urine of infected individuals, but there are no recorded cases of infection by these secretions, and the risk of infection is negligible (Macintyre et al., 2004).

Knowledge of prevention methods

Despite considerable effort over the last 20 years, HIV/AIDS prevention programs have met with limited success. One possible reason may be that such programs have been designed using broad epidemiological indicators, grouping together countries that have similar overall prevalence of disease and using the same strategies for each group. A better approach might be to consider the dynamics of infection on a country-by-country basis, pinpointing where new infections are occurring, and whether and to what extent prevention policies are effecting change. Then, tailored programs can be designed around the specific needs of each country and changed as necessary. For example, Kenya, Cambodia and Honduras can all be classified as having generalized epidemics with HIV prevalence of over 1% of the adult population. Yet recent data on new HIV infections in these countries clearly shows that whereas heterosexual sex with a partner is the most common form of infection for Cambodia, accounting for 58% of new infections, homosexual sex is most important in Honduras (40%) and sex work in Kenya (37%). Thus, prevention measures in these countries need to be different accordingly (Reproductive Health Matters, 2003).

Similarly, comparison of prevalence and incidence rates by type of exposure can also give useful information. In Indonesia, 40% of current prevalence is due to drug injection with shared unclean needles, but 80% of incidence, i.e. new infection is acquired this way. In Cambodia over the last eight years, there has been a fall in incidence due to sex work from 70% to 23% but a rise in that due to heterosexual sex with a partner who had previously been engaged in high-risk behaviour from 25% to 58%. Such analyses often show that in many countries it is the most marginalized and difficult-to-reach groups who are most at risk of infection and fuelling the continuing epidemic. This is a strong argument for a clearer focus on nationally and locally relevant policies and interventions (Pisani et al., 2003).

HIV infection in Ethiopia is contracted through heterosexual contact, and hence information on sexual behaviour is important in designing, implementing and monitoring programs to control the spread of the epidemic (EDHS, 2005). In the context of HIV/AIDS prevention, limiting the number of sexual partners and having protected sex are crucial to combating the epidemic. Likewise, HIV/AIDS prevention programs focus their messages and efforts on three important aspects of behaviour: delaying sexual debut in young adolescents (abstinence), limiting the number of sexual partners (staying faithful to one partner), and use of condoms (the ABC message) (Ruth et al., 2003).

Misconceptions about HIV/AIDS

A number of misconceptions have arisen surrounding HIV/AIDS. Three of the most common are that AIDS can spread through causal contact, that sexual intercourse with a virgin will cure AIDS, and that HIV can infect only homosexual men and drug users (Blechner, 1997).

Many Ethiopian adults lack accurate knowledge about the ways in which the AIDS virus can and cannot be transmitted. Particularly critical is the fact that 51 % of women and 69 % of men know that a healthy- looking person can have (and thus transmit) the virus that causes AIDS. Many women and men also erroneously believe that AIDS can be transmitted by mosquito bites; only 47 % of women and 57 % of men rejected this common misconception. Larger proportions of women and men are aware that HIV cannot be transmitted by supernatural means (70 % and 84 %, respectively) and by sharing food with person who has AIDS (63% and 80%, respectively) (EDHS, 2005).

The routes of HIV transmission are well documented by scientists, but health officials and concerned social behavioural scientists continually grapple with the public's unfounded fears concerning the potential for HIV transmission by other means. HIV differs from other infectious viruses in that it dies quickly if exposed to the environment. No evidence has linked HIV transmission to casual contact with an infected person, such as a handshake, hugging, or kissing, or even sharing dishes or bathroom facilities. Studies have been unable to identify HIV transmission from modes common to other infectious diseases, such as an insect bite or inhaling virus-infected droplets from an infected person's sneeze or cough (Encarta, 2006).

5.3 Attitude Relating to HIV/AIDS

HIV related stigma

Stigma and discrimination associated with HIV/AIDS influence how people living with and affected by HIV/AIDS are treated in society. As stated aptly, 'A stigmatizing social environment poses barriers to HIV prevention and care at many different levels by virtue of being, by definition, a non-supportive environment' (Wood and Aggelton, 1999:7).

Stigma and discrimination can arise from community-level responses to HIV/AIDS. The harassing of individuals suspected of being infected or of belonging to a particular group has been widely reported. It is often motivated by the need to blame and punish and in extreme circumstances can extend to acts of violence and murder. Attacks on men who are assumed gay have increased in many parts of the world, and HIV/AIDS related murders have been reported in countries as diverse as Brazil, Colombia, Ethiopia, India, South Africa and Thailand. (UNAIDS, 2006).

Lack of confidentiality has been repeatedly mentioned as a particular problem in health care settings. Many people living with HIV/AIDS do not get to choose how, when and to whom to disclose their HIV status. When surveyed recently, 29% of persons living with HIV/AIDS in India, 38% in Indonesia and over 40% in Thailand said their HIV-positive status had been revealed to someone else without their consent. Huge differences in

practice exist between countries and between health care facilities within countries. In some hospitals, signs have been placed near people living with HIV/AIDS with words such as 'HIV-positive' and 'AIDS' written on them (World Population Prospects, 2005).

Attitudes towards negotiating safer sex

People's ability to negotiate safer sex practices with their partners is a vital link in the prevention of HIV transmission (Priscilla et al., 2005). In Uganda, 72% of women and 82% of men feel that a wife is justified in refusing sex with her husband if she knows he has a sexually transmitted infection. Similarly, 71% of women and 83% of men believe that a wife is justified in asking her husband to use condom if she knows that he has a sexually transmitted infection (MoH-Uganda, 2007).

Attitudes of adults towards educating children on condom use

Six in ten adults believe that children aged 12 - 14 years should be taught about condom use to avoid AIDS. Men are more likely than women to believe that children should be taught about condom use. There are few differences in this belief by background characteristics. Older respondents (those in their 40s) are less likely to support condom education for youth, as are those with no education, and those in the lowest wealth quintile (MoH- Uganda, 2007).

5.4 HIV/AIDS Related Behaviour/Practice

The relationship between perception of risk and sexual behaviour is complex and poorly understood. Several studies conducted in different cultures have associated HIV risk perception with a wide range of variables: number of sexual partners, knowledge of sexual partner's past sexual behaviour, fear of AIDS, shame associated with having AIDS, community perception of AIDS risk, knowing someone with AIDS, discussing AIDS at home, closeness of parent-child relationships and religious affiliation (Macintyre et al., 2004). In Sub-Saharan Africa, socio-cultural norms and practices are major determinants of sexual risk-taking behaviour (Caldwell, et al., 1999).

Age at first sexual intercourse

A major component of HIV prevention program is encouraging young people to delay sexual debut (Sharon, 2006). However, studies conducted in various countries: Zambia, Lusaka (CARE, 1998), rural Malawi (Weiss, 1996), Kenya and Ghana (UNAIDS, 2002), and Ethiopia (EDHS, 2005) all indicate that early age at first sexual intercourse often tempers up with the incidence of HIV/AIDS.

Higher risk sex

The potential negative outcomes of young people and unsafe sexual practices are high risk of contracting RTI/STIs and HIV, through high rates of unprotected sex with multiple partners (Encarta, 2006). These days the number of cases of STIs is considerably increasing (EPHA, 2005). As the AIDS epidemic continues to spread across Asia and Africa, there is growing concern that the prevalence of risky sexual activity among young people may be rising. Such concerns are prominent in the continents as a whole, where the market reforms that were initiated during the late 1980s have introduced a variety of new media from abroad, and encouraged the growth of consumer culture and migration to urban areas among younger individuals (Dang et al., 1997).

Voluntary HIV counselling and testing

Many people are unaware that they are infected with HIV (Kumaranayake and Watts, 2001). Less than 1% of the sexually active urban population in Africa has been tested, and this is even lower in rural populations. Furthermore, only 0.5% of pregnant women attending urban health facilities counselled are tested or received their results. Again, this proportion is even lower in rural health facilities. Counselling and testing is the initial step in identifying pregnant women who are HIV positive and eligible for interventions to produce MTCT of HIV (Priscilla et al., 2005).

HIV testing in pregnancy

The principal purpose of testing a woman for HIV during pregnancy is to prevent any possible infection being passed to her unborn baby. These days, in areas where antiretroviral therapy is available, testing in pregnancy also allows for the mother's infection to be identified and treated. This will enable her to remain healthy enough to care for her baby and see her child grow up (Mukasa et al., 2002).

Prevalence of HIV/AIDS

Africa has the highest incidence of HIV/AIDS in the world. That is, out of the total 40 million PLWHA, 95% are said to live in the developing world and 71% (28.5 million) in Sub-Saharan Africa. The rate at which the pandemic is spreading is also much higher in this region (UNAIDS 2002).

Sub-Saharan Africa is more heavily affected by HIV/AIDS than any other region of the world. An estimated 24.5 million people were living with HIV at the end of 2005 and approximately 2.7 million additional people were infected during that year. In just the past year, the AIDS epidemic in Africa has claimed the lives of an estimated 2 million people in this region. More than twelve million children have been orphaned by AIDS (UNAIDS, 2006).

Both HIV prevalence rates and the numbers of people dying from AIDS vary greatly between African countries. In Somalia and Senegal the HIV prevalence is under 1% of the adult population, whereas in South Africa and Zambia around 15-20% of adults are infected with HIV. In four southern African countries, the national adult HIV prevalence rate has risen higher than was thought possible and now exceeds 20%. These countries are Botswana (24.1%), Lesotho (23.2%), Swaziland (33.4%) and Zimbabwe (20.1%) (UNAIDS, 2006).

HIV prevalence by socio-economic characteristics (marital status, type of union, pregnancy)

South Africa

Available evidence from South Africa on the relationship between marital status and HIV is contradictory. HIV prevalence among married people was 10.5% compared with 15.7% among unmarried people. The risk of HIV infection did not differ significantly between married and unmarried people when age, sex, socio-economic status, race, type of locality, and diagnosis of a sexually transmitted infection (STI) were considered. However, the risk of HIV infection remained high among unmarried compared with married people. Increased prevention strategies that take socio-cultural context into account are needed for married people (Shisana et al., 2005). HIV data gathered in South Africa's extensive antenatal clinic surveillance system suggest that HIV prevalence has not yet reached a plateau. The latest data show a continuing rising trend nationally in HIV infection levels among pregnant women attending public antenatal clinics from 22.4% in 1999 to 30.2% in 2005 (a 35% increase) (Department of Health, South Africa, 2006).

Mozambique's HIV infection levels in pregnant women are highest in the south and centre of the country. Especially sharp rises have been found in Maputo City, Maputo Province, Sofala and Gaza, where HIV prevalence ranged between 18% and 27% in 2004. HIV prevalence in pregnant women has almost doubled since 2000-reaching 9.2% and 11% in Nampula and Niassa, respectively, in 2004. The fact that prevalence has also been rising in young pregnant women suggests that new infections continue to increase, and may signal further growth in the country's epidemic (Conselo Nacional de Combate ao HIV/SIDA, 2006).

Overall HIV prevalence among women attending antenatal clinics in Zambia has also stayed relatively stable since the mid-1990s, and has remained at 19%-20% between 1994 and 2004 among pregnant women aged 15-39 years. Yet the data show divergent, localized patterns and trends, with HIV infection levels in pregnant women aged 15-44 years ranging from under 10% at some sites to over 25% at several others. HIV prevalence was highest in urban areas along the country's main transport routes, such as Kabwe, Livingston and Ndola. In rural areas, however, HIV prevalence increased marginally from 11% in 1994 to 12% in 2004 (MoH Zambia, 2005).

East Africa

With 1.3 million people currently living with HIV, Kenya is still continuing with a serious AIDS epidemic, despite evidence of declining HIV prevalence among pregnant women (Cheluget et al., 2006; WHO, 2005; Baltazar, 2005). National adult HIV prevalence fell from 10% in the late 1990s to about 7% in 2003 (MoH Kenya, 2005) and just over 6% in 2005 (UNAIDS, 2006). There has also been a steep drop in infection levels among pregnant women at a majority of antenatal sites with consistent and comparable HIV data. At some of those sites, HIV prevalence fell from 25% in 1998 to 8% in 2004, while in others it declined from 15% in 2001 to 4.3% in 2004 (Cheluget, Marum and Stover, 2006).

Based on HIV data collected at antenatal clinics, national adult HIV prevalence in Ethiopia was 3% in 2005, with infection levels more than five times in urban (10.5%) than in rural (1.9%) areas. A gradual decline in HIV prevalence among pregnant women has been found at some antenatal clinics in Addis Ababa and in other urban areas, most notably since 1997-98 (MoH, 2006). However, prevalence remains high in Addis Ababa overall (where it has remained at 14%-16% since the mid-1990s) and in other urban areas (where it has stayed between 11% and 13% in the same period) (Hladik et al., 2006). More than 80% of the country's population lives in rural areas, and prevalence among women attending antenatal clinics there rose from 1.9% in 2000 to 2.6% in 2003 and 2.2% in 2005 (Hladik et al., 2006; MoH Ethiopia, 2004; 2006).

The most recent data from neighbouring Eritrea also indicate a stable epidemic, with 2.4% of women seeking antenatal care testing HIV-positive. This is consistent with the HIV prevalence of 2.8% and 2.4% found in 2001 and 2003, respectively. Prevalence ranged from over 7% in Assab (in the south) and 6% at Assia (in the centre of the country), to 0% in Shieb (also in the centre) (MoH Eritrea, 2006).

HIV prevalence by other background characteristics (residence, region, education, employment, wealth quintile)

According to the Ministry of Health, HIV prevalence in Ethiopia was 3.5% (10.5% for urban and 1.9% for rural areas). The urban epidemic appeared to have stabilized between 1996 and 2000 and showed a slow and gradual decline since 2001. The rural epidemic peaked between 1999 and 2001 and showed a relative stabilization following this peak (MoH, 2006).

With regard to regional variations, HIV prevalence is highest in Gambella and Addis Ababa. Other regions in which HIV prevalence exceeds the national average include Harari, Dire Dawa, Afar, Tigray, and Amhara. Somewhat surprisingly, SNNP Region has the lowest prevalence (0.2%) (EDHS, 2005).

HIV prevalence and circumcision

Researchers have noted significant variations in HIV prevalence that seemed, at least in certain African and Asian countries, to be associated with levels of male circumcision in the community. A strong association has been found between HIV prevalence and male circumcision (Buve et al., 2001). In areas where circumcision is common, HIV prevalence tends to be lower; conversely, areas of higher HIV prevalence overlapped with regions where male circumcision is not commonly practiced (Auvert et al., 2005).

Recent evidence from the Rakai circumcision study suggests that men with multiple partners may get the greatest benefit from circumcision, partly because it reduced the risk of ulcerative sexually transmitted infections. However, the study also showed that the protective effect grew over time, possibly due to the hardening of the skin on the head and shaft of the penis after circumcision (Alcorn, 2007). Evidence from another study carried out in Kenya also suggests that circumcision does not result in an increase in risky sex over time, a concern that has been raised by researchers, advocates and politicians reacting to early study results (Ibid). The relationship between male circumcision and HIV levels in Ethiopia conforms to the expected pattern of higher rates among uncircumcised men than circumcised men (0.9% and 1.1 %, respectively) (EDHS, 2005).

HIV prevalence and risky sexual behaviour

Uganda and Thailand used behavioural survey as an evidence to prove the reduction of AIDS prevalence in the past couple of years as a result of change in high-risk human behaviours gained earlier (Kilian et al., 1999; Mills et al., 1997). For effective prevention and handling of the epidemic, definitive and concrete knowledge on means of viral transmission and rejecting prevalent misconception are critical (Mesfin et al., 2004).

Assessment of high risk behaviours in Ethiopia was initiated as early as 1990s. High score especially in some mode of viral transmission was documented which showed some success especially in raising awareness both in the general and sub-group of the population (Eshetu et al., 1997). Adequate knowledge on transmission of HIV by itself is no use if individuals do not know that they can get infection from asymptomatic carriers who look well and healthy (Mesfin et al., 2004).

HIV prevalence and migration

Many studies have linked the spread and diffusion of HIV/AIDS to migratory processes. Population mobility or migration has been found to facilitate partner change and introduction of new infections into less mobile populations. In its various forms (permanent, seasonal, circular) population migration may be a risk factor for HIV infection. Prothero (1996), for example, has reported significant interactions between disease and population

mobility in tropical Africa in recent decades. Similarly, Hunt (1996) identifies migration as a key predictor for the higher AIDS prevalence rates in African countries with a higher concentration of labour migrants. Wawer and others (1991) linked truck drivers (who go infected through contacts with sex workers) to the spread of AIDS to their partners (girlfriends and wives) (Ghana DHS, 2005).

6. Presentation of the Findings

6.1 Knowledge about HIV/AIDS

The primary concern in the fight against the HIV/AIDS epidemic has to be enabling people to know how HIV is being transmitted from one person to another. A good knowledge of how HIV is transmitted and possible prevention methods has thus significant contributions to reduce the spread of the epidemic.

6.1.1 Awareness Levels of HIV/AIDS

Table 6.1 shows the extent of association between awareness on HIV/AIDS and its related socio-economic and demographic characteristics. The level of knowledge of AIDS in Ethiopia is very high. For both men aged 15-59 and women aged 15-49, most of the demographic and socio-economic variables are significantly associated with awareness of HIV/AIDS. About 90 % of women (aged 15-24) and 98 % of men (aged 35-49) have heard of AIDS. Also about 90 % of married women have good level of awareness. Concerning men, the highest level of knowledge is found among divorcees/separated (98.4%), followed by married ones (97.5%). With regard to place of residence, knowledge of HIV/AIDS is higher in urban than rural. For instance, awareness about HIV/AIDS is the highest in Addis Ababa and the lowest in Somali Region (which is only 50%).

As educational level of both women and men increases, level of knowledge of HIV/AIDS also increases. The highest level of knowledge of AIDS is found among women (99.8%) and men (99.9%) with secondary and higher level of education. But, currently employed women (92.9%) have higher level of knowledge than unemployed women. Surprisingly enough, the largest proportions of currently unemployed men (99.1%) have better knowledge of AIDS than employed men (96.1%).

Access to HIV related information via mass media (radio, TV and newspapers) has significant role in increasing the level of awareness of HIV/AIDS. Both women and men (100%) who had everyday access to newspapers have high knowledge of AIDS. Women who have access to radio everyday (98.4%) and men who have heard of HIV information at least once a week (100%) have the highest level of awareness about AIDS. Both women (99.9%) and men (100%) who watched TV almost everyday have better knowledge about AIDS. Decision making practices of respondents have also effect upon the level of knowledge about AIDS. Women with high level of decision making autonomy have higher level (90.5%) of knowledge about AIDS than women without that autonomy.

Table 6.1. The percentage of women aged 15-49 and men 15-59 who had heard about HIV/AIDS, by socio-economic and demographic factors

Variables	Awareness about HIV/AIDS					
	Women			Men		
	Percent	Number	P-value	Percent	Number	P-value
Age			0.006			0.041
15-24(ref)	90.2	5 811		95.3	2 399	
25-34	89.0	4 325		97.9	1 495	
35-49	90.2	3 933		96.9	1 570	
50-59				97.2	569	
Marital status			0.000			0.045
Never Married(ref)	91.2	3 514		95.0	2 419	
Married/living Together	89.1	9 067		97.5	3 424	
Divorced/Separated/Widowed	91.1	1 230		98.4	191	
Education			0.000			0.000
No Education(ref)	86.1	9 270		93.1	2 589	
Primary	95.6	3 123		98.8	2 252	
Secondary and Higher	99.8	1 676		99.9	1 191	
Currently employed			0.000			0.000
NO(ref)	88.7	10 085		99.1	868	
Yes	92.9	3 980		96.1	5 164	
Occupation			0.000			0.000
Professional/Technical Managerial	98.9	181		100.0	137	
Clerical	100.0	56		100.0	9	
Sales and services	94.6	1 508		97.8	356	
Skilled Manual	94.1	290		100.0	173	
Unskilled Manual	93.3	238		98.5	131	
Agriculture	90.5	2 484		95.8	4 431	
Wealth quintile			0.000			0.000
Lowest(ref)	80.4	2 428		91.3	1 100	
Second	87.8	2 643		96.3	1 183	
Middle	89.2	2 731		97.4	1 081	
Fourth	91.5	2 647		97.7	1 199	
Highest	97.0	3 621		99.2	1 469	
Newspaper or Magazine			0.000			0.000
Not at all	88.2	11 895		95.2	4 142	
Less once a week	99.3	1 788		99.5	1 433	
At least once a week	98.4	184		98.9	189	
Almost everyday	100.0	169		100.0	259	
Radio			0.000			0.000
Not at all	85.2	8 060		93.0	2 274	
Less once a week	94.8	3 753		98.1	1 865	
At least once a week	97.0	526		100.0	245	
Almost everyday	98.4	1 721		99.4	1 644	
Television			0.000			0.000
Not at all	87.8	11 473		95.2	4 017	
Less once a week	98.5	1 482		99.5	1 362	
At least once a week	99.2	258		98.2	224	

Almost everyday	99.9	837	100.0	422
Residence			0.000	.000
Rural	88.0	11 570	96.0	5 117
Urban	98.6	2 499	99.7	916
Region			0.000	0.000
Tigray	97.1	919	99.7	366
Afar	85.6	146	95.5	66
Amhara	87.9	3 482	96.5	1 521
Oromiya(ref)	94.7	5 010	98.4	2 222
Somali	50.0	486	66.3	202
Ben-Gumuz	67.7	124	94.4	54
SNNP	87.3	2 993	97.0	1 244
Gambella	63.6	44	85.7	21
Harari	97.4	39	100.0	16
Addis Ababa	99.2	756	99.3	292
Dire Dawa	97.1	69	96.7	30
Decision making autonomy			0.000	Na
Low(ref)	84.5	3 807		
Medium	92.0	3 669		
High	90.5	3 079		

na= Not applicable

6.1.2 Knowledge of HIV Prevention Mechanisms

Table 6.2 presents levels of knowledge of HIV prevention methods by background characteristics among women aged 15-49 and men aged 15-59. Among women and men, age, marital status, education, wealth quintile, region of residence, media exposure and current employment status significantly associate with the three basic HIV prevention mechanisms or ABC (abstinence, faithfulness and condom use).

The efforts of preventing HIV transmission focus upon three acts or behavioural changes that comprise delaying sexual debut (abstinence) during early age, limiting the number of sexual partners (being faithfulness) and the use of condom. About 48.2% of young women and 61.7% of men display desirable level of awareness about the fact that the chances of getting AIDS could be reduced by abstaining from sexual intercourse. Similarly, 24.2% of young women and 44.3% of men express awareness that getting AIDS could be reduced by using condom.

The levels of knowledge of prevention methods are higher in urban than rural areas both among women and men. Across regions, there are considerable variations wherein women's levels of knowledge for various prevention methods are highest in Addis Ababa and lowest in Somali Region. The levels of knowledge for various methods are high in Tigray, Harari, Addis Ababa and Dire Dawa than in other regions and lowest in Somali Region.

Considering marital status, about 55.7 % of never married women or 39.5% of married women know abstinence as a means of reducing HIV infection. The level of awareness about abstinence is high among divorced/

separated and widowed men. Being faithful and condom use to prevent HIV infections are found to be high among never married women (42.8% and 30.8%, respectively) and men (43.3% and 44.2%, respectively).

With regard to schooling, women and men with higher educational levels are more aware of various prevention methods than others. Women who are currently employed have more awareness about the various prevention methods than unemployed women. The reverse is true with men. The largest proportions of both women and men who engage in professional/technical occupations have better awareness of the various prevention methods while women and men in higher wealth quintiles have better awareness than those in lower ones.

The results of the bivariate analyses suggest that there are several factors that are significantly associated with ABC knowledge of HIV prevention mechanisms for both women and men. Table 6.2 presents the results of multivariate analysis with the standard errors and OR for ABC knowledge of preventing mechanisms among men and women. An OR gives an estimate of the magnitude of the association being compared.¹

Abstaining from sex

The multivariate model demonstrates that among women aged 15-49 years, region of residence, wealth quintile, current employment status, decision-making autonomy and media exposure are significantly associated with the knowledge of abstinence. On the other hand, among men aged 15-59, region, education and wealth quintile are the major demographic and socio-economic variables that are significantly associated with the knowledge of abstinence.

Women living in urban areas are almost two times more likely to be exposed to the knowledge of abstinence than women living in rural areas. The adjusted OR also shows that women living in Tigray, Amhara, SNNPR and Dire Dawa are more likely exposed to the knowledge of abstinence than those living in Oromia Region.

As the wealth of women and men increases their knowledge of all the ABC method of preventing HIV/AIDS also increases. Women's decision making autonomy has also a significant effect on the knowledge of abstinence as preventing method of HIV/AIDS. Women who have medium and high decision making autonomy are almost 1.5 times more exposed to knowledge of abstinence than those with the lowest decision making autonomy.

Wealth quintile and media exposure (women) have only significant effect on knowledge of abstinence. As the wealth and media exposure (women only) increase their knowledge of abstinence as HIV prevention mechanism also increases.

¹ In this analysis an OR of 1.0 indicates no difference between the variable and ABC knowledge of preventing mechanisms; an OR below 1.0 indicates a negative association between the variable and ABC knowledge of preventing mechanisms and an OR above 1.0 indicates a positive association.

Being faithful

The model shows that among women aged 15-49, knowledge of being faithful to one uninfected partner as a means of reducing HIV infection is significantly associated with region of residence, education, and wealth quintile. On the other hand, among men aged 15-59, region of residence, education, wealth quintile, and media exposure are the major demographic and socio-economic variables that are significantly associated with the knowledge of being faithful as a preventing mechanism.

Women who have medium and higher education are more likely exposed to knowledge of being faithful to one uninfected partner as preventing mechanism of HIV/AIDS. Those married men living with their partner are 1.67 times more likely to be faithful than those never married.

Condom use

Among women aged 15-49 age, region, education, wealth quintile, and media exposure are significantly associated with the knowledge of condom use to prevent HIV infection. On the other hand, among men aged 15-59, region, education, current employment status and radio exposure are the major socio-economic variables that are significantly associated with knowledge of condom use to prevent HIV infection as compared to their respective reference group.

Among women aged 15-49, those who live in urban areas are 2.65 times more likely to be aware of condom use as a method of HIV prevention than those living in rural areas. Women living in Tigray, Amhara, SNNPR, Dire Dawa, Gambella and Addis Ababa are aware of condom use in a better way than those living in Oromia Region. On the other hand, men living in Somali and Afar regions are less likely to be aware of condom use as a method of preventing HIV/AIDS infection as compared to men living in Oromia Region.

Men and women having completed primary and secondary level of education are more likely aware of condom use than those with no education. Similarly, media exposure has also a significant effect in increasing awareness about HIV/AIDS for both men and women (see table 6.2).

Table 6.2 ABC knowledge of preventive mechanisms among women age d 15-54, and men aged 15-59, by socio-economic and demographic characteristics

Variables	ABC knowledge of HIV prevention mechanisms							
	Abstinence		Be faithful to uninfected partner		Condom use			
	Women	Men	Women	Men	Women	Men	Women	Men
	Exp B	Exp B	Exp B	Exp B	SE	Exp B	SE	Exp B
Age	ns	ns		ns				ns
15-24(ref)					1.00			
25-34					0.715			
35-49					0.649*			
50-59								
Marital status	ns	ns		ns		ns		ns
Never married(ref)								
Married/living together								
Divorced/Separated/Widowed								
Education	ns							
No education(ref)		1.00	1.00	1.00	1.00		1.00	
Primary		1.233*	1.386	1.001	2.409***		1.761***	
Secondary and higher		1.662**	2.278*	1.996**	2.573**		3.032***	
Currently Employed	ns	ns	ns	ns	ns			
No(ref)								1.00
Yes								0.535*
Occupation				ns				
Professional/Technical Managerial	3.017**	2.172**	0.868		3.669**		1.502	
Clerical	1.294	2.214	0.449		1.433		1.221	
Sales and services	1.274	1.162	0.697		1.566		1.541*	
Skilled manual	1.575	1.211	0.748		2.121*		1.374	
Unskilled manual	1.713	1.533	0.447*		0.928		1.243	
Agriculture (ref)		1.00			1.00		1.00	
Wealth quintile								ns
Lowest(ref)		1.00	1.00	1.00	1.00			
Second		1.253	2.069**	1.010	2.215*			
Middle		1.173	1.862*	1.410*	2.207*			
Fourth		1.414*	1.776*	1.299	1.297			
Highest		1.624*	1.862*	1.537*	1.644			
Newspaper or Magazine			ns		ns		ns	
Not at all (ref)		1.00		1.00				
Less once a week	0.852	0.775*		1.265*				
At least once a week	0.184**	0.959		1.761				
Almost everyday	1.333	1.004		1.258				
Radio			ns		ns			
Not at all (ref)		1.00		1.00			1.00	
Less once a week		1.059		1.162			1.342	
At least once a week		.961		1.265			1.407	
Almost everyday		1.340*		1.297*			1.457**	
Television		ns	ns		ns		ns	
Not at all(ref)				1.00				
Less once a week				0.924				

At least once a week				1.757*		
Almost everyday				1.249		
Residence	ns	ns	ns			ns
Rural(ref)					1.00	
Urban					2.722**	
Region						
Tigray	0.838	0.632**	4.239***	3.133***	15.927***	1.536*
Afar	1.591	1.250	0.516	0.544**	1.243	0.784
Amhara	1.300	2.403**	1.338	1.803***	2.978**	2.800***
Oromia(ref)	1.00	1.00	1.00	1.00	1.00	1.00
Somali	0.301	0.195**	0.167	0.455**	0.748	0.132***
Ben-Gumuz	0.644	1.623**	0.589	0.867	1.927	1.836***
SNNPR	1.497	2.321***	1.746*	1.067	2.725**	1.572**
Gambella	0.986	0.791	2.022*	0.587*	4.429***	2.057***
Harari	0.513*	2.146***	2.273*	5.036***	2.086	1.053
Addis Ababa	0.968	2.263***	1.638	0.680	2.878**	1.089
Dire Dawa	2.305*	0.195**	0.829	0.455**	2.280	0.132***
Decision making autonomy	na	ns	na			na
Low(ref)	1.00				1.00	
Medium	1.355*				0.926	
High	1.239				0.492*	

P value <0.05 , ** P value < .01, *** P value < 0.001 , aged ns= Not significant , aged na= Not applicable

Table 6.3 Percentage of women aged 15-49 and men aged 15-59 who know the ABC prevention mechanisms, by demographic and socio-economic characteristics, EDHS 2005

Variables	Abstinence (1)		Be faithful to uninfected partner (2)		Condom use (3)	
	Women	Men	Women	Men	Women	Men
	Percent	Percent	Percent	Percent	Percent	Percent
Age						
15-24	48.2	61.7	39.8	45.2	24.2	44.3
25-34	42.3	58.0	38.1	49.2	16.4	34.5
35-49	43.1	60.1	35.4	48.8	13.5	34.2
50-59	na	61.3	na	50.6	na	25.8
Marital						
Never married(ref)	55.7	62.4	42.8	43.3	30.8	44.2
Married/living together	39.5	58.4	36.1	51.2	13.6	32.7
Divorced/Separated/Widowed	50.7	69.1	38.9	38.8	19.1	41.6
Education						
No education	39.6	52.7	31.5	41.6	9.5	23.2
Primary	46.7	60.4	38.9	45.5	22.3	39.1
Secondary and higher	63.6	75.5	62.8	63.6	50.4	63.6
Currently employed						
No	42.6	68.6	36.6	52.4	17.6	55.4

Yes	50.3	58.9	41.3	46.8	21.8	34.5
Occupation						
Professional/Technical /Managerial	71.5	80.9	72.1	63	62.9	61
Clerical	60.7	66.7	67.9	77.8	55.4	77.8
Sales and services	55.1	67.1	41.1	55.5	25.8	51.2
Skilled manual	63.2	74.3	46.8	62.9	35.6	61.2
Unskilled manual	56	62	48.1	51.9	33.8	42.3
Agriculture	41.7	57	36	45.1	11.1	31.3
Wealth quintile						
Lowest	36.2	44.2	32.4	37	10.8	25.8
Second	39	57.1	32.6	43	11.3	30.8
Middle	40	60.2	32.9	49	11.9	33.1
Fourth	43.5	62.9	34.1	49.4	12.4	37.9
Highest	56.5	71.9	49.5	56	35.4	53.8
Newspaper or magazine						
Not at all	41.2	57.2	34	42.7	12.7	29.5
Less once a week	61.2	65.2	55.5	58.6	45.6	52.7
At least once a week	58.9	71.5	63.9	60.2	47.2	61.1
Almost everyday	62.3	73.5	50.9	53.4	44	60.1
Radio						
Not at all	40	55	31.7	38.8	11	28.2
Less once a week	46.7	61	42.8	51.3	23.3	37.3
At least once a week	48.2	59.6	46.4	44.2	23.2	40.4
Almost everyday	58.6	66.8	48.5	55.7	36.7	49.7
Television						
Not at all	40.8	56.8	33.9	44	12.7	31.4
Less once a week	54.1	63.6	48.6	51.6	32	43.9
At least once a week	58.8	66.1	58.3	56.3	46.5	47.1
Almost everyday	70.2	77.7	58.3	62.7	53.6	67
Residence						
Rural	40.7	58	33.5	45.8	12.2	33.3
Urban	60.8	72.6	54.8	57.5	43.2	60.2
Region						
Tigray	46.1	44.7	47.2	67.6	38.1	44
Afar	22.5	50.9	30.9	31.6	16	25
Amhara	49.5	66.9	38.4	54.4	15.9	45.1
Oromiya	35.4	53.8	32.7	41.9	13.2	30.4
Somali	31.6	15.8	18.6	23.3	17.5	6
Ben-Gumuz	43.5	60.4	37.7	45.8	18.8	40.4
SNNPR	49.7	69.3	37.4	44.8	16.5	37.5
Gambella	45.5	40	38.1	30	33.3	52.6
Harari	55.6	81.3	58.3	81.3	36.1	50
Addis Ababa	70.3	80.3	63	56.9	48.6	60.4
Dire Dawa	67.2	73.3	41	56.7	34.4	50

Decision making autonomy						
Low	33.6	na	34	na	10.8	na
Medium	42.6	na	37.3	na	14.4	na
High	40.1	na	36.1	na	17.2	na
Age at first marriage						
Less than 15	43.5	na	34.8	na	13.1	na
15-17	39.1	58.9	35.8	57.7	14.3	34.1
Greater than 17	40.6	58.3	39	50.2	16.6	32.4
Sexual partners in the last 12 months						
0	53.9	62.7	40.8	41.6	27.7	41.8
1	42.8	58.6	38.3	51.5	14.9	34.7
2+	57.1	63.4	42.9	54.5	71.4	36.6
Male circumcision						
No	na	59.2	na	36.5	na	34.1
Yes	na	60.4	na	48.5	na	37.9
Premarital sex						
No	41.5	58.8	36.7	49.8	14.1	30.1
Yes	38.1	57.6	33.6	53.8	18.4	37.5

na = Not applicable

6.2. Attitudes towards HIV/AIDS by Socio-economic and Demographic Characteristics

6.2.1 Safer Sex²

As women become older, obviously their assertiveness increases. In this tune, the likelihood of having positive attitude towards the question 'is wife justified to ask husband to use condom if she suspects her husband has STI?' is lower among women aged 25 years and above than women under 25; 25-29 (OR=0.681), 30-39 (OR=0.744), and 40-49 (OR=0.634). Women employed in non-agricultural sector and educated women (primary and above) have a better positive attitude to the same question than unemployed and uneducated women, respectively.

Compared to the poorest, uninformed, and those residing in rural areas, wealthier, informed - exposed to mass media, and women residing in urban areas are more likely to agree to the statement 'wife is justified to ask husband to use condom if she suspects her husband has STI' than not to, respectively. Further, women who had one sexual partner in the last 12 months preceding the survey (OR=1.748) and premarital sexual experience (OR=1.398) had affirmative response to the question 'is wife justified to ask husband to use condom if she suspects her husband has STI?' as compared to women who had no sexual partner in the last 12 months preceding the survey and those with no premarital sexual experience, respectively.

² * Decision making autonomy considers only women who are currently in marital union. Thus, the variable 'Marital status' is constant for all selected cases and is removed from the analysis.

Women who had lower decision making autonomy have less likely response to the question 'is wife justified to ask husband to use condom if she suspects her husband has STI?' as compared to women with high decision making autonomy (OR= 0.567). Age at first marriage has no effect on the negotiation of safer sex.

Women residing in Afar, Somali, Benishangul Gumuz and Gambella regions (OR=0.385) are less firm in upholding the fact that 'wife is justified to ask husband to use condom if she suspects her husband has STI' than women in Oromia Region. However, those women residing in Tigray (OR=1.451), Amhara (OR=2.080) and Addis Ababa (OR=3.722) regions are more assertive to indicate that 'wife is justified to ask husband to use condom if she suspects her husband has STI' than women in Oromia Region.

Nevertheless, among men older than 40 years the question 'is wife justified to ask husband to use condom if she suspects her husband has STI?' was not as such accepted as compared to those men in their 30s. The likelihood of accepting the same question is lower among men employed in non-agricultural sectors and those residing in urban areas than men employed in agricultural sector and residing in rural areas, respectively (OR=0.845, OR=0.789) though statistically insignificant. In the same reckoning, educated men with media exposure as well as better economic status display better likelihood of accepting the question.

Table 6.4. Parameter estimates and standard errors for attitude towards negotiating safer sex among women (15-49) and men (15-59), from logistic regression model, EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	0.073	0.154	1.075
25-29	-0.383	0.103	0.681**	0.067	0.124	1.07
30-39	-0.296	0.094	0.744**	0.000		1.000
40-49	-0.456	0.111	0.634**	-0.385	0.102	0.680**
50-59	Na	na	na	-0.416	0.118	0.659**
Education						
No education	0.000		1.000	0.000		1.000
Primary	0.658	0.098	1.931**	0.371	0.096	1.450**
Secondary+	0.665	0.208	1.945**	1.1	0.184	3.003**
Occupation						
Not working	0.000		1.000	0.455	0.325	1.576
Agricultural worker	-0.043	0.093	0.958	0.000		1.000
Non-agricultural worker	0.466	0.114	1.594**	-0.168	0.200	0.845
Residence						
rural	0.000		1.000	0.000		1.000
urban	0.446	0.181	1.562*	-0.237	0.248	0.789

Media Exposure						
Not at all	0.000		1.000	0.000		1.000
Infrequently	0.313	0.089	1.368**	0.337	0.096	1.400**
Frequently	0.854	0.117	2.349**	0.435	0.11	1.546**
Wealth quintile						
Poorest	0.000		1.000	0.000		1.000
Poorer	-0.065	0.117	0.937	0.133	0.12	1.142
Middle	0.060	0.117	1.062	0.238	0.125	1.269†
Richer	0.246	0.119	1.279*	0.345	0.133	1.411*
Richest	0.548	0.146	1.730**	0.774	0.178	2.167**
Administrative region						
Oromia	0.000		1.000	0.000		1.000
Tigray	0.372	0.151	1.451*	0.507	0.179	1.660**
Afar, Somali, Ben-Gumuz, Gambella	-0.956	0.208	0.385**	-0.951	0.165	0.386**
Amhara	0.733	0.095	2.080**	0.668	0.107	1.950**
SNNPR	-0.005	0.101	0.995	-0.869	0.104	0.419**
Addis Ababa	1.314	0.353	3.722**	1.005	0.4	2.731*
Harari, Dire Dawa	0.041	0.446	1.042	-0.536	0.472	0.585
Sexual partners in the last 12 months						
0	0.000		1.000	-0.271	0.263	0.763
1	0.558	0.218	1.748*	0.000		1.000
2+	1.083	0.784	2.954	-0.246	0.197	0.782
Premarital sex						
No	0.000		1.000	0.000		1.000
Yes	0.335	0.121	1.398**	-0.094	0.087	0.91
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	-0.005	0.088	0.995	0.051	0.124	1.053
18+	-0.095	0.100	0.910	0.000		1.000
Decision making autonomy						
Low	-0.568	0.159	0.567**	na	na	na
Medium	-0.051	0.085	0.950	na	na	na
High	0.000		1.000	na	na	na
Male circumcision						
No	na	na	na	0.000	0.166	1.000
Yes	na	na	na	0.000		1.000
Constant	-1.692	0.252		0.122	0.125	

na = Not applicable ** P<0.01

* P<0.05 † P<0.10

6.2.2 Misconception about HIV/AIDS^{3*}

Failure of accepting the fact that a healthy looking person can have AIDS virus is common among women of age 25 years and above than those under 25. The likelihood of refuting the statement that 'a healthy looking person can have AIDS virus' is lower among those women who attended primary education (OR=0.635), and secondary and above (OR=0.466) than uneducated women, and those employed and residing in urban areas (OR=0.547) than their counterparts. In addition, the disagreement to the statement is lower among well-to-do women - richest (OR=0.540) and those who had exposure to mass media (OR=0.636) than the poorest women and those with no access to mass media.

Misconception about HIV/AIDS is lower among women with multiple sexual partners (OR=0.271) and with premarital sexual experience (OR=0.722) than women with a single sexual partner in the last 12 months preceding the survey and without a history of premarital sex though the result for the former is not statistically significant. With regard to age at first marriage, women married by age 18 and above are more likely to disagree to the statement 'a healthy looking person can have AIDS virus' than women married before age 15 (OR=1.294). Decision making autonomy has no effect on whether to agree or not. All regions except Addis Ababa exhibit higher OR than Oromia Region. The result for Amhara Region is, however, not statistically significant.

It is no surprise that disagreeing to the statement 'a healthy looking person can have AIDS virus' is lower among men with primary level of education (OR=0.578) and secondary and above level of education (OR=0.566), as well as wealthier men, and those men who have frequent exposure to mass media than men who are uneducated, poor and have no exposure to mass media, respectively. Furthermore, discordance to the statement 'a healthy looking person can have AIDS virus' is higher among men residing in Afar, Somali, Benishangul Gumuz, and Gambella regions (OR=1.506) and SNNPR (OR=1.438) than men in Oromia Region. It is lower among men in Tigray (OR=0.625), Amhara (OR=0.480) and Addis Ababa (OR=0.757) regions than men in Oromia Region. But the result for Addis Ababa is not statistically significant.

Number of sexual partners, age at first marriage, premarital sex and condom use during the last intercourse do not have statistical significance to explain misconception of men about HIV/AIDS. Circumcised men are less likely to disagree to the statement 'a healthy looking person can have AIDS virus' than uncircumcised males.

^{3*} Decision making autonomy considers only women who are currently in marital union. Thus, the variable 'Marital status' is constant for all selected cases and is removed from the analysis.

Table 6.5. Parameter estimates and standard errors for misconception about HIV/AIDS among women (15-49) and men (15-59) from logistic regression model, EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	-0.041	0.159	0.960
25-29	0.124	0.102	1.132	-0.015	0.128	0.985
30-39	0.350	0.095	1.419**	0.000		1.000
40-49	0.052	0.111	1.054	0.114	0.106	1.120
50-59	na	na	na	0.169	0.124	1.184
Education						
No education	0.000		1.000	0.000		1.000
Primary	-0.454	0.100	0.635**	-0.547	0.099	0.578**
Secondary+	-0.764	0.230	0.466**	-0.568	0.183	0.566**
Occupation						
Not working	0.000		1.000	-0.183	0.368	0.832
Agricultural worker	-0.437	0.092	0.646**	0.000		1.000
Non-agricultural worker	-0.303	0.117	0.738**	-0.360	0.227	0.698
Residence						
Rural	0.000		1.000	0.000		1.000
Urban	-0.604	0.200	0.547**	-0.420	0.303	0.657
Media exposure						
Not at all	0.000		1.000	0.000		1.000
Infrequently	-0.452	0.089	0.636**	-0.144	0.099	0.866
Frequently	-0.222	0.120	0.801†	-0.404	0.115	0.667**
Wealth quintile						
Poorest	0.000		1.000	0.000		1.000
Poorer	-0.065	0.113	0.937	-0.221	0.123	0.802†
Middle	-0.159	0.115	0.853	-0.353	0.129	0.703**
Richer	-0.188	0.120	0.829	-0.078	0.135	0.925
Richest	-0.616	0.148	0.540**	-0.768	0.189	0.464**
Administrative region						
Oromia	0.000		1.000	0.000		1.000
Tigray	1.058	0.153	2.881**	-0.469	0.184	0.625*
Afar, Somali, Ben-Gumuz, Gambella	0.995	0.215	2.704**	0.410	0.181	1.506*
Amhara	0.010	0.096	1.010	-0.734	0.112	0.480**
SNNPR	0.546	0.097	1.725**	0.363	0.107	1.438**
Addis Ababa	-0.815	0.427	0.443†	-0.278	0.482	0.757
Harari, Dire Dawa	0.773	0.445	2.167†	0.407	0.542	1.502
Sexual partners in the last 12 months						
1	0.000		1.000	0.000		1.000
2+	-1.305	1.013	0.271	0.184	0.199	1.202
Premarital sex						

No	0.000		1.000	0.000		1.000
Yes	-0.326	0.126	0.722**	-0.101	0.091	0.904
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	-0.045	0.089	0.956	-0.172	0.130	0.842
18+	0.258	0.099	1.294**	0.000		1.000
Decision making autonomy						
Low	0.091	0.155	1.095	na	na	na
Medium	0.125	0.084	1.133	na	na	na
High	0.000		1.000	na	na	na
Condom use during the last intercourse						
No	0.000		1.000	0.000		1.000
Yes	1.099	0.667	3.002†	0.225	0.516	1.253
Male circumcision						
No	na	na	na	0.624	0.168	1.866**
Yes	na	na	na	0.000		1.000
Constant	0.140	0.133		-0.025	0.127	

na= Not applicable ** P<0.01 * P<0.05 † P<0.10

6.2.3 HIV Related Stigma⁴

Among men (15-59) and women (15-49), education, residence, exposure to mass media, region of residence and wealth are significantly associated with willingness to care for relatives who are victims of HIV/AIDS.

Men (OR=0.738) and women (OR=0.794) in their late 20s are less likely to care for a relative with HIV/AIDS than men in their 30s and women below age 25, respectively. On the other hand, both men and women who reside in urban areas, attended education and had exposure to mass media are more willing to care for a relative with HIV/AIDS than men and women who reside in rural areas, are uneducated and have no exposure to mass media, respectively. For instance, men with secondary and above education are about five times more likely to care for a relative with HIV/AIDS than uneducated men (OR=4.641) and the likelihood of women with primary education to care for a relative with HIV/AIDS was about two times greater than that of uneducated women (OR=1.365).

Wealth status of women has no association with their willingness to care for a relative with HIV/AIDS but richer men are more willing to care for a relative with HIV/AIDS than poor men. Region-wise, both men and women residing in all regions except Harari and Dire Dawa are more likely to care for a relative with HIV/AIDS than those men and women in Oromia Region. The result for Harari and Dire Dawa regions is not different from Oromia Region.

⁴* Decision making autonomy considers only women who are currently in marital union. Thus, the variable 'Marital status' is constant for all selected cases and is removed from the analysis.

Considering premarital sexual experience, men without a history of premarital sexual experience are 1.203 times more likely to care for a relative with HIV/AIDS than men with premarital sexual experience. Circumcised males are less likely to care for a relative with HIV/AIDS than uncircumcised males (OR=0.722). On the other hand, women with high decision making autonomy are more willing to care for a relative with HIV/AIDS than otherwise.

Table 6.6. Parameter estimates and standard errors for attitude towards caring for HIV/AIDS victims, from logistic regression model of EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	-0.135	0.160	0.874
25-29	-0.231	0.105	0.794*	-0.304	0.128	0.738*
30-39	0.006	0.097	1.006	0.000		1.000
40-49	-0.084	0.112	0.919	-0.098	0.110	0.906
50-59	na	na	na	-0.169	0.128	0.844
Education						
No education	0.000		1.000	0.000		1.000
Primary	0.310	0.101	1.363**	0.220	0.099	1.246*
Secondary	0.909	0.243	2.482**	1.535	0.220	4.641**
Occupation						
Agricultural worker	0.190	0.096	1.209*	0.000		1.000
Not working	0.000		1.000	-0.213	0.341	0.808
Non-agricultural worker	0.034	0.117	1.035	-0.147	0.220	0.864
Residence						
Rural	0.000		1.000	0.000		1.000
Urban	1.041	0.203	2.832**	0.673	0.312	1.960*
Exposure to edia						
Not at all	0.000		1.000	0.000		1.000
Infrequent	0.242	0.091	1.274**	0.296	0.101	1.345**
Frequent	0.213	0.122	1.238†	0.534	0.117	1.707**
Wealth						
Poorest	0.000		1.000	0.000		1.000
Poor	-0.017	0.114	0.983	0.155	0.127	1.167
Middle	-0.089	0.117	0.915	0.247	0.132	1.281†
Fourth	-0.283	0.122	0.753*	0.370	0.142	1.448**
Richest	0.065	0.148	1.067	0.621	0.187	1.862**
Region						
Oromia	0.000		1.000	0.000		1.000
Tigray	2.303	0.195	10.007**	1.972	0.226	7.187**
Afar, Somali, Ben-Gumuz, Gambella	0.855	0.196	2.352**	1.469	0.208	4.343**
Amhara	1.483	0.100	4.404**	1.692	0.116	5.430**
SNNPR	0.308	0.094	1.361**	0.543	0.106	1.722**

Addis Ababa	1.471	0.425	4.355**	1.681	0.608	5.371**
Harari, Dire Dawa	0.108	0.439	1.114	0.045	0.530	1.046
Sexual partners in the last 12 months						
0	0.000		1.000	0.384	0.308	1.468
1	0.166	0.202	1.180	0.000		1.000
2+	-0.854	0.971	0.426	0.202	0.216	1.223
Premarital sex						
No	0.000		1.000	0.185	0.093	1.203*
Yes	-0.030	0.128	0.970	0.000		1.000
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	-0.057	0.090	0.945	0.011	0.132	1.011
18+	-0.088	0.099	0.916	0.000		1.000
Decision making autonomy						
Low	-0.053	0.153	0.948	na	na	na
Medium	-0.153	0.085	0.858†	na	na	na
High	0.000		1.000	na	na	na
Male circumcision						
No	na	na	na	0.000		1.000
Yes	na	na	na	-0.325	0.175	0.722†
Constant	-0.704	0.239		-0.361	0.215	

na = Not applicable ** P<0.01 * P<0.05 † P<0.10

6.3 Behaviour/Practice Related to HIV/AIDS, by Socio-economic and Demographic Characteristics

6.3.1 HIV Testing ⁵

Women aged 25 and above are less likely to check their HIV status prior to the survey than women under 25. The likelihood of HIV testing was greater among those women who were educated, employed in non-agricultural sectors and resided in urban areas than women who were uneducated, were unemployed and resided in rural areas. However, results are statistically significant only for education.

Women who have exposure to mass media are more likely to have an HIV test than women without exposure to mass media, though the result is significant only for women with frequent exposure to mass media (OR=2.142). The likelihood for HIV testing is low for women with only one sexual partner in the last 12 months preceding the survey and high among women with multiple sexual partners than those who have none (the latter is statistically significant).

⁵* Decision making autonomy considers only women who are currently in marital union. Thus, the variable 'Marital status' is constant for all selected cases and is removed from the analysis. Because the standard errors of the estimates for wealth quintile were exceptionally bigger the variable was removed from the analysis.

Moreover, HIV testing was less common among women with low decision making autonomy and premarital sexual experience than women with higher decision making autonomy and without a history of premarital sexual experience, respectively. However, results are not statistically significant. Women married at the age of 15 and above have high likelihood of HIV testing than women married before age 15 though the result is statistically significant for those women married at age 18 and above (OR=3.867). The likelihood of HIV testing is lower among women residing in Tigray, Afar, Somali, Benishanugl Gumuz, and Gambella and higher in Amhara, SNNPR, Addis Ababa, Harari and Dire Dawa than Oromia (statistically significant only for Addis Ababa).

Also, men aged 40 and above are less likely to have had HIV test than men in their 30s whilst men below 30 were more likely to have taken the test. The likelihood of HIV testing is greater among men who are educated, employed in non-agricultural sectors (OR=1.851) and resided in urban areas (OR=1.478) than men who are uneducated, employed in agricultural sector and resided in rural areas, respectively (statistically insignificant for place of residence).

Men with frequent exposure to mass media are twice more likely to have had HIV test than those men with no exposure to mass media, and richer men are more likely to have done HIV test before the survey than the poor. The number of sexual partners during 12 months preceding the survey, male circumcision and premarital sex have no effect on HIV testing. Men married before age 18 are less likely to have had HIV test before the survey than men married by age 18 and above. HIV testing is lower for men residing in Afar, Somali, Benishangul Gumuz and Gambella whilst it is higher in Tigray, Amhara, SNNPR, Addis Ababa, Harari and Dire Dawa than Oromia.

Table 6.7 Parameter estimates and standard errors for HIV testing from logistic regression model, EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	1.209	0.265	3.351**
25-29	-1.336	0.351	0.263**	0.544	0.241	1.722*
30-39	-1.722	0.36	0.179**	0.000		1.000
40-49	-2.023	0.51	0.132**	-0.603	0.268	0.547*
50-59	na	na	na	-1.53	0.476	0.217**
Education						
No education	0.000		1.000	0.000		1.000
Primary	1.48	0.394	4.391**	0.696	0.258	2.005**
Secondary+	2.334	0.48	10.321**	0.711	0.329	2.037*

Occupation						
Not working	0.000		1.000	-0.282	0.696	0.754
Agricultural worker	-0.813	0.69	0.444	0.000		1.000
Non-agricultural worker	0.386	0.286	1.471	0.616	0.351	1.851†
Residence						
Rural	0.000		1.000	0.000		1.000
Urban	0.533	0.402	1.705	0.391	0.387	1.478
Media exposure						
Not at all	0.000		1.000	0.000		1.000
Infrequently	0.174	0.417	1.19	0.383	0.315	1.467
Frequently	0.762	0.427	2.142†	0.747	0.316	2.111*
Wealth quintile						
Poorest	-	-	-	0.000		1.000
Poorer	-	-	-	-0.53	0.48	0.589
Middle	-	-	-	0.144	0.411	1.155
Richer	-	-	-	0.688	0.4	1.99†
Richest	-	-	-	0.368	0.459	1.445
Administrative region						
Oromia	0.000		1.000	0.000		1.000
Tigray	-0.1	0.531	0.905	0.298	0.419	1.347
Afar, Somali, Ben-Gumuz, Gambella	-0.027	0.8	0.973	-0.665	0.655	0.515
Amhara	0.527	0.391	1.693	0.566	0.259	1.761*
SNNPR	0.193	0.368	1.213	0.482	0.257	1.62†
Addis Ababa	1.201	0.431	3.323**	1.601	0.365	4.96**
Harari, Dire Dawa	1.054	0.794	2.87	0.667	0.727	1.949
Sexual partners in the last 12 months						
0	0.000		1.000	-1.599	1.038	0.202
1	-0.551	0.662	0.577			
2+	2.541	1.231	12.692*	-0.449	0.615	0.638
Premarital sex						
No	0.000		1.000	0.000		1.000
Yes	-0.405	0.37	0.667	-0.105	0.204	0.901
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	0.33	0.421	1.391	-1.256	0.393	0.285**
18+	1.353	0.399	3.867**	0.000		1.000
Decision making autonomy						
Low	-0.069	0.811	0.933	na	na	na
Medium	0.234	0.363	1.264	na	na	na

High	0.000		1.000	na	na	na
Male circumcision						
No	na	na	na	0.000		1.000
Yes	na	na	na	0.446	0.48	1.561
Constant	-4.869	0.821		-5.09	0.632	

na= Not applicable, ** P<0.01, * P<0.05, † P<0.10

Condom Use

The likelihood of condom use during the last intercourse is higher among older women than younger women (15-24), and women with secondary and above education (OR=3.41) than uneducated women. The likelihood of condom use is lower among women with primary education (OR=0.166) than uneducated women; the result is not significant, however.

There is a lower likelihood of condom use during the last intercourse among urban residents (OR=0.948) and employed women than rural residents and unemployed women, respectively. On the contrary, women with exposure to mass media have higher likelihood of condom use during last intercourse than women without exposure to mass media (statistically insignificant).

There is, also, a lower likelihood of condom use among richer women, women with multiple sexual partners during the last 12 months preceding the survey and those women having low decision making autonomy as compared to their counterparts. Even though some results are statistically significant, the result could not be trusted as the standard errors of the estimates are exceptionally higher.

Age at first marriage and experience of premarital sex have no effect on the likelihood of condom use among women (statistically insignificant). But women married by age 18 and above have lower likelihood (OR=0.424) of using condom than women married before age 15.

Women residing in Tigray, Afar, Amhara, Somali, Benishangul Gumuz, and Gambella less likely use condom than women in Oromia Region, who in turn are less likely to use condom than women living in Addis Ababa, Harari and Dire Dawa (statistically insignificant except for Addis Ababa). Also, the likelihood of condom use is lower among men below age 25 (statistically insignificant) and higher among men in their late 20s (OR=3.104, statistically significant) and above age 40 than those men in their 30s (statistically insignificant). The likelihood of condom use during the last intercourse was higher among men with secondary and above education (OR=1.409) and primary education (OR=0.427) than uneducated men.

Men employed in non-agricultural sectors and with a frequent exposure to mass media (OR=4.588) are more likely to use condom than men employed in agricultural sectors and men without exposure to mass media (statistically significant only for men with frequent exposure to mass media). Men residing in urban areas have lower likelihood of using condom than men in rural areas but the result is statistically insignificant.

It appears that richer men use condom less often than poorer men do. Men residing in Addis Ababa, Harari and Dire Dawa have higher likelihood of condom use than men in Oromia although they are better than other men in the rest of the regions. This portrays that there is variation in condom use among men in different regions but the evidence is not strong enough to support such an assertion.

Uncircumcised males and men with multiple sexual partners in the last 12 months preceding the survey are practicing condom use better than their counterparts. Experience of premarital sex has no effect on the likelihood of condom use during the last intercourse.

Table 6.8 Parameter estimates and standard errors for condom use during the last sex, from logistic regression model of EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	-0.776	1.079	0.46
25-29	0.494	0.822	1.640	1.133	0.474	3.104*
30-39	0.824	0.726	2.280	0.000		1.000
40-49	0.500	0.833	1.649	-0.720	0.631	0.487
50-59				-0.958	0.878	0.384
Education						
No education	0.000		1.000	0.000		1.000
Primary	-1.797	1.643	0.166	-0.852	0.671	0.427
Secondary+	1.227	1.007	3.41	0.343	0.716	1.409
Occupation						
Not working	0.000		1.000	1.445	0.961	4.24
Agricultural worker	-0.452	0.851	0.637	0.000		1.000
Non-agricultural worker	-1.454	0.956	0.234	0.341	0.783	1.406
Residence						
Rural	0.000		1.000	0.000		1.000
Urban	-0.053	1.169	0.948	-0.487	0.759	0.615
Media exposure						
Not at all	0.000		1.000	0.000		1.000
Infrequently	0.71	0.655	2.034	0.122	0.801	1.129

Frequently	0.211	0.936	1.235	1.523	0.751	4.588*
Wealth quintile						
Poorest	0.000		1.000	0.000		1.000
Poorer	-1.457	0.770	0.233†	-1.829	0.959	0.161†
Middle	-16.517	1 305.69	0.000	-1.685	0.903	0.185†
Richer	-16.500	1 343.73	0.000	-1.722	0.958	0.179†
Richest	-0.925	0.935	0.396	-0.161	0.836	0.852
Administrative region						
Oromia	0.000		1.000	0.000		1.000
Tigray	-0.11	0.878	0.896	-0.208	0.825	0.812
Afar, Somali, Ben-Gumuz, Gambella	-1.534	1.555	0.216	-1.762	1.372	0.172
Amhara	-1.122	0.971	0.326	-0.288	0.601	0.75
SNNPR	0.060	0.730	1.062	-0.458	0.63	0.632
Addis Ababa	1.593	0.961	4.919†	0.487	0.735	1.628
Harari, Dire Dawa	1.003	1.629	2.727	0.618	1.246	1.856
Sexual partners in the last 12 months						
1	0.000		1.000	0.000		1.000
2+	-15.172	11 724.34	0.000	0.273	1.385	1.313
Premarital sex						
No	0.000		1.000	0.000		1.000
Yes	0.105	0.859	1.11	-0.006	0.453	0.994
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	0.211	0.587	1.235	0.11	0.687	1.116
18+	-0.858	0.753	0.424	0.000		1.000
Decision making autonomy						
Low	-15.314	2 087.72	0.000	na	na	na
Medium	0.181	0.601	1.198	na	na	na
High	0.000		1.000	na	na	na
Male circumcision						
No	na	na	na	1.357	0.694	3.885†
Yes	na	na	na	0.000		1.000
Constant	-4.659	0.884		-4.766	0.705	

na = Not applicable, ** P<0.01, * P<0.05, † P<0.10

6.3.3 Drunkenness During Sexual Intercourse

Women in their late 20s seem to have less likelihood of using alcohol (either of the partner during intercourse) than women below age 25. But women of age 30 and above have higher likelihood of alcohol use during intercourse

than women below age 25 although these results are not statistically significant. The likelihood of alcohol use during intercourse is less among women with secondary and above education (OR=0.325) and higher among women with primary education (OR = 1.220) than uneducated women (the latter is statistically insignificant).

There is high tendency to use alcohol among employed women both in agricultural sector (OR=2.257) and non-agricultural sectors (OR=3.375) than unemployed women. Women residing in urban areas (OR=0.787) and with frequent exposure to mass media (OR=0.919) are less likely to use alcohol during intercourse as compared to women living in rural areas and women without exposure to mass media, respectively, but results are statistically insignificant.

Women having above average wealth status more likely tend to use alcohol during intercourse than poor women. Women living in Tigray (OR=0.295), Afar, Somali, Benishangul Gumuz, and Gambella (0.344) have low tendency of alcohol use during intercourse than women living in Oromia, and women living in Addis Ababa and SNNPR have more or less similar tendency of alcohol use during intercourse as that of women in Oromia.

Women with low decision making autonomy (OR=0.762), women who had multiple sexual partners during the last 12 months preceding the survey (OR=0.108) and women with a history of premarital sexual intercourse (OR=0.828) appear to have low practice of alcohol use during intercourse than their counterparts. The likelihood of alcohol use during intercourse is lower among men in their late 20s (OR=0.605) and higher among men above age 40 than men in their 30s (the latter is statistically insignificant). The odds ratio of alcohol use during intercourse is higher among men with some education (primary and above) than uneducated men, but the result is not statistically significant.

Men employed in non-agricultural sectors are less likely to use alcohol during intercourse (OR=0.605) than men employed in agricultural sectors; the result is statistically insignificant, however. Men residing in urban areas (OR=2.046) and men with exposure to mass media (OR=1.498, infrequent and OR=1.468, frequent) have consumed less alcohol during intercourse than men residing in rural areas as well as men without exposure to mass media, respectively.

Men with medium or better economic status get involved in alcohol use during intercourse than poor men but result is significant only for medium wealth status (OR=1.498) and highest wealth status (OR=1.735). Alcohol consumption is less common during intercourse among men residing in SNNPR, Afar, Somali, Benishangul Gumuz and Gambella regions than those in Oromia Region. And it is higher among men in Tigray (OR=2.956), Amhara (OR=3.317) and Addis Ababa (OR=1.376) regions than those in Oromia although results are significant only for Amhara and Tigray regions.

Men who had multiple sexual partners (OR=2.268) and with premarital sexual experience (OR=1.768) have higher practice of alcohol use during intercourse than men with a single partner in the last 12 months preceding the survey and without premarital sexual experience, respectively. Moreover, uncircumcised males (OR=2.583) and men married before age 18 (OR=1.980) have higher likelihood of practicing alcohol use during intercourse than circumcised men and men married by age 18 and above, respectively.

Table 6.9 Parameter estimates and standard errors for drunkenness by either partner during last sex, from logistic regression model of EDHS 2005

Variables	Women			Men		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Age						
15-24	0.000		1.000	-0.245	0.276	0.783
25-29	-0.316	0.203	0.729	-0.502	0.249	0.605*
30-39	0.197	0.171	1.217	0.000		1.000
40-49	0.045	0.201	1.046	0.058	0.173	1.060
50-59	na	na	na	0.295	0.193	1.343
Education						
No education	0.000		1.000	0.000		1.000
Primary	0.199	0.172	1.22	-0.152	0.173	0.859
Secondary+	-1.124	0.433	0.325**	-0.458	0.279	0.633
Occupation						
Not working	0.000		1.000	-0.766	0.61	0.465
Agricultural worker	0.814	0.16	2.257**	0.000		1.000
Non-agricultural worker	1.216	0.178	3.375**	-0.205	0.359	0.815
Residence						
Rural	0.000		1.000	0.000		1.000
Urban	-0.24	0.321	0.787	0.716	0.386	2.046†
Media exposure						
Not at all	0.000		1.000	0.000		1.000
Infrequently	0.308	0.157	1.36†	0.404	0.181	1.498*
Frequently	-0.085	0.228	0.919	0.384	0.197	1.468†
Wealth quintile						
Poorest	0.000		1.000	0.000		1.000
Poorer	0.414	0.227	1.512†	-0.055	0.251	0.946
Middle	0.173	0.241	1.189	0.404	0.238	1.498†
Richer	0.562	0.231	1.754*	0.3	0.247	1.350
Richest	0.706	0.266	2.026**	0.551	0.298	1.735†
Administrative region						

Oromia	0.000		1.000	0.000		1.000
Tigray	-1.221	0.433	0.295**	1.084	0.264	2.956**
Afar, Somali, Ben-Gumuz, Gambella	-1.069	0.486	0.344*	-0.641	0.477	0.527
Amhara	0.019	0.169	1.019	1.199	0.179	3.317**
SNNPR	-0.098	0.179	0.907	-0.236	0.242	0.790
Addis Ababa	-0.146	0.52	0.864	0.319	0.397	1.376
Harari, Dire Dawa	-1.414	1.375	0.243	-0.139	0.961	0.870
Sexual partners in the last 12 months						
1	0.000		1.000	0.000		1.000
2+	-2.227	3.486	0.108	0.819	0.302	2.268**
Premarital sex						
No	0.000		1.000	0.000		1.000
Yes	-0.189	0.236	0.828	0.57	0.147	1.768**
Age at first marriage						
<15	0.000		1.000	na	na	na
15-17	-0.033	0.164	0.968	0.683	0.187	1.980**
18+	0.116	0.177	1.123	0.000		1.000
Decision making autonomy						
Low	-0.271	0.303	0.762	na	na	na
Medium	-0.036	0.158	0.965	na	na	na
High	0.000		1.000	na	na	na
Male circumcision						
No	Na	na	na	0.949	0.309	2.583**
Yes	Na	na	na	0.000		1.000
Constant	-3.395	0.272		-3.837	0.271	

na = Not applicable, ** P<0.01, * P<0.05, † P<0.10

6.4 HIV Prevalence as Measured by HIV Serostatus

The EDHS 2005 final report presented the results of HIV prevalence by background characteristics for all respondents tested positive for HIV (3,532 men and 4,357 of women). These background characteristics include age, marital status, place of residence, education, employment and wealth index.

6.4.1 HIV Serostatus

Table 6.10 shows the results of the bivariate analysis of socio-economic and demographic characteristics and HIV serostatus among sexually experienced women and men. Overall, 2.4 percent of sexually experienced women aged 15-49 and 1.3 percent of sexually experienced men aged 15-59 tested positive for HIV. Among sexually experienced women and men, age (men only), marital status, region of residence, education, wealth

index, current employment status (women only) and media exposure are the demographic and socio-economic variables that are significantly associated with HIV serostatus.

As shown in figure 2, the proportion of women and men infected with HIV is not evenly distributed by age group. For women, it peaks at age 35-39 and for men at age 40-44. Given the lag time between infection and death, the women and men in these peak age groups were probably infected during their early to mid 30s.

Never married women and divorced/separated/widowed men in EDHS 2005 have the highest rates of HIV infection. It is likely that death, separation and divorce with their spouses increases their vulnerability to HIV infection by placing them in positions where they may be sexually exploited.

High prevalence of HIV positive individuals for both sexes in EDHS 2005 is observed in Addis Ababa and Gambella. The proportion of HIV positive women is 10.7 percent in Addis Ababa and 6.3 percent in Gambella. On the other hand, the proportion of HIV positive men is 4.5 percent in Addis Ababa and 7.1 percent in Gambella.

Both men and women living in urban areas are more exposed to HIV/AIDS than those living in rural areas. Similarly, for both sexes it was observed that the prevalence is highest in those with secondary and higher education (11.4 percent for women and 3.8 percent for men) and in those with the highest wealth quintile (9.3 percent for women and 3.6 percent for men).

Current employment status is significantly associated with HIV serostatus for women though not significantly associated for men. The proportion of HIV serostatus for employed women is higher than unemployed ones. Similarly, age is significantly associated with HIV serostatus for men though not significantly associated for women. HIV prevalence is highest for young and adult men in the age group 15-34 (1.6 percent) and 35- 49 (1.6 percent)

Table 6.10 Percentage of sexually experienced women age 15-49 and men 15-59 who tested positive for HIV, by background characteristics, EDHS 2005

Background characteristics	Women			Men		
	Percentage of HIV positive	Total number tested	P-value	Percentage of HIV positive	Total number tested	P-value
Age			0.697			0.014
15-24	2.3(26)	1 143		0.4(2)	489	
25-34	1.9(31)	1 644		1.6(19)	1 167	
35-49	3.0(48)	1 570		1.6(22)	1 370	
50-59				0.6(3)	506	
Marital status			0.000			0.010
Never married	9.7(8)	93		0.9(3)	330	
Married/living together	1.6(58)	3 675		1.3(39)	3 038	
Divorced/Separated/Widowed	6.6(39)	589		2.5(4)	163	
Residence			0.000			0.000
Rural	0.8(30)	3 757		0.9(27)	3 106	
Urban	12.4(74)	599		4.5(19)	426	
Region			0.000			0.000
Tigray	3.3(10)	299		0.6(8)	1 280	
Amhara	2.2(26)	1 184		2.8(6)	214	
Oromiya	3.0(45)	1 492		2.1(20)	923	
Gambella	6.3(1)	16		7.1(1)	14	
Addis Ababa	10.7(16)	149		4.5(7)	155	
Others	0.6(7)	1 215		0.4(4)	945	
Education			0.000			0.000
No education	1.2(38)	3 303		0.9(16)	1 852	
Primary	4.4(33)	748		0.9(10)	1 147	
Secondary and higher	11.4(35)	306		3.8(20)	533	
Wealth quintile			0.000			0.000
Lowest	0.3(3)	888		0.9(6)	653	
Second	1.2(11)	901		0.3(2)	735	
Middle	0.6(5)	864		1.0(7)	723	
Fourth	0.2(2)	807		0.6(4)	677	
Highest	9.3(84)	896		3.6(27)	744	
Currently Working			0.010			0.436
No	2.2(68)	3 125		0.6(1)	156	
Yes	3.0(37)	1 231		1.3(45)	3 375	
Media exposure			0.000			0.000
Not at all	0.8(21)	2 585		0.9(10)	1 187	
Infrequently	2.1(23)	1 073		0.6(7)	1 100	
Frequently	9.0(61)	680		2.3(29)	1 242	
Decision making autonomy			0.235	Na		
Low	1.0(13)	1 298				
Medium	1.8(35)	1 918				
High	2.3(10)	433				
Circumcision	na					0.000
No				1.5(3)	194	
Yes				1.3(43)	3 330	
Total	2.4(105)	4 357		1.3(46)	3 532	

na= Not applicable, Others = Afar, Ben-Gumuz, Dire Dawa, SNNPR, Harari, Figures in parentheses are respondents tested positive.

7. Discussion of the Key Findings

As spelt out elsewhere, three major factors (demographic, socio-economic and cultural) are expected to fuel the prevalence of HIV and contribute to its variations among various regions of Ethiopia. Empirical evidences detected in both literature review and in-depth analyses of the EDHS 2005 data often corroborate each other and concur with the above stated expectation.

Each of these three fuelling factors are decomposed into their component parts and the significances of each part in influencing KABP are measured through the deployment of various statistical tools as schematized in the analytical framework and indicated in set objectives. Concerning demographic factors, age, sex and marital status are the three major background characteristics of the study population overly measured. The key empirical evidence here is the high level of knowledge of the respondents about the prevalence of HIV/AIDS regardless of their age and marital status. Evidences from Uganda are similar to the Ethiopian case (MoH-Uganda, 2007) despite more or less varying socio-economic and cultural characteristics.

Across educational attainments and employment situations of the respondents, little variation in levels of knowledge is observed even with regard to gender differences. However, unemployed men (99.1%) have better knowledge of HIV/AIDS than employed men (96.1%), which in fact demands further scrutiny to uncover the reason behind. In this regard, it is acknowledged that the relationships between the perception of risk and sexual behaviour are rather complex and thinly understood (Caldwell et al., 1999).

Access to information of any source (radio, TV and newspapers) carrying messages attuned to HIV/AIDS has been found significant in increasing the knowledge of the respondents. Nevertheless, lack of access to information, education and counselling about the disease also contribute to continued high-risk behaviours. The only and best protection against HIV infection is to alter behavioural patterns that make people liable to the pandemic. Studies conducted in Ethiopia on KAP on various target groups came up with baseline data on sexual behaviour, knowledge and attitude towards HIV/AIDS and the urgency of comprehensive health education as an intervention method (Mehret et al., 2002).

Knowledge of abstinence as a mechanism of HIV prevention seems to be higher among young women (48.2%) and men (61.7%) than their older counterparts, although this is deplorably low given the character of youth in sexual activities. Knowledge of HIV prevention through condom use is by far lower among younger women (24.3%) and younger men (44.3%) which might indicate that the elementary know-how of fighting the pandemic has not been inculcated into the minds of the vast majority of the Ethiopian youth population.

Abstinence, condom use and faithfulness to one uninfected partner are often underlined as the fundamental basis of preventing HIV infection (Ruth et al., 2003; Encarta, 2006; MoH-Uganda, 2007).

Urban residents, as expected, have greater level of knowledge about the spread of HIV and its prevention mechanisms as compared to the rural ones. For instance, women aged 15-49 and those who reside in urban areas are 2.65 times more likely to be aware of the use of condom as a method of HIV prevention than those women of the same age who reside in rural areas.

Region-wise, respondents of Somali and Afar are the most unaware of all regions about the use of condom as a means of HIV prevention. Further, empirical evidences attest to the fact that women and men who completed primary and secondary education have higher likelihood of awareness about HIV/AIDS than those women who have not been to school.

Negotiations for safer sex reflect about issues that are fairly obvious. Wealthier, informed and urban residents display affirmative response to the question 'is wife justified to ask husband to use condom if she suspects her husband has STI?' A subject of particular interest in the negotiation of safer sex is that most women with low decision-making autonomy have less likely response to this question (OR=0.567). This is strong evidence which signifies the role of gender relations in spreading HIV infection. As a whole, women living in Afar, Somali, Benishangul Gumuz and Gambella regions (OR=0.385) have less likelihood of accepting the question than those women in Oromia whilst the latter are in turn less likely upholding the question as compared to women in the rest of the regions. In relation to this, studies conducted elsewhere reveal that women are generally vulnerable to the infection of HIV given societal gender norms, attitudes and roles ascribed to them as opposed to men (Wuleta, 2000; Ahari, 2007).

Younger women (15-24) are less likely to misconceive the possibility that a healthy looking person can have AIDS virus than older women in a similar way as that of the younger men (OR=960) compared with older men. These evidences point out the fact that the younger groups of the population appear to have better understanding and less misconception about the whole gamut of HIV/AIDS than their older counterparts. However, even high level of knowledge on HIV transmission by itself has no practical meaning if people fail to know that they can be infected from asymptomatic carriers who look healthy (Mesfin et al., 2004).

Regarding behavioural issues, women married at the age of 15 and above have high likelihood of HIV testing than women married before age 15. Women who married early in life, the evidence elucidates quite clearly, are thus unable to know their HIV status. Same evidence is found out for men married before age 18. Early age of marriage for Ethiopians remains to be not only a socio-economic menace but also an avenue for the spread

of HIV. Studies carried out in various parts of the world: Zambia, Lusaka (CARE, 1998); Rural Malawi (Weiss, 1996) and Kenya and Ghana (UNAIDS, 2002) indicate that early age at first intercourse tempers up with the prevalence of HIV/AIDS. Same evidence is documented in Mozambique where HIV prevalence has been rising in young pregnant women as compared to pregnant women in other age categories (Conselho Nacional de Combate ao HIV/SIDA, 2006).

Moreover, men with frequent exposure to mass media and educated ones have more tendencies for HIV testing than their counterparts. Similarly, the likelihood of condom use is higher among those men who have exposure to mass media (OR=1.235) and are educated (OR=3.41) than those otherwise. Therefore, these two socio-economic variables have significant effect in shaping the behaviours of men.

Urban women are less likely to be motivated to consume alcohol during sexual intercourse (OR=0.787) than rural women, as are women with frequent exposure to mass media (OR=0.919) than not. These evidences spelt out the fact that urban women are well situated than rural women to protect themselves from HIV infection and thus its consequential spread.

8. Conclusions and Recommendations

Depending upon the reviewed literature and major findings, the following conclusions and recommendations are forwarded.

Conclusions

- There is high level of understanding of the effect of abstinence, being faithful to one uninfected partner and condom use as ways of preventing HIV infection, though the attitudinal and behavioural/practices are relatively lower.
- Access to HIV information via mass media (radio, television and newspapers) is quite high and messages communicated appear to have elevated the level of knowledge of the respondents.
- As level of education, frequency of exposure to mass media and level of income increase, knowledge of abstinence from sexual debut as an effective method of preventing HIV infection significantly increases.
- Age differences among the respondents do contribute to variations in the levels of understanding the ways through which HIV is spreading and the mechanisms of preventing it. In fact, the younger the respondents the better the understanding.
- Urban respondents have more knowledge, positive attitude and desirable behavioural changes to get involved in redressing the spread of HIV infection than their rural counterparts.
- The higher women's decision making autonomy in the households, the more their negotiation for safer sex with their husbands.
- Observable regional variations with regard to the knowledge, attitude and behavioural patterns do exist as functions of the varying socio-economic and cultural as well as other forces.
- As the levels of education and economic status increase, being faithful to one uninfected partner also increases and therefore uneducated and poor respondents seem to have not been faithful to their partners.

Recommendations

- Since there is relatively high level of knowledge but low levels of attitudinal and behavioural changes about HIV/AIDS, future interventions need to give due focus to the possibility of increasing the attitudinal and behavioural/practices of the people regarding HIV prevention.
- Cultural factors have a relative influence in the processes of preventing HIV infection, and hence intervention strategies need to be tailored towards culture oriented harmful practices within the communities at large.
- Mass media channels have proved to be better means of communicating HIV/AIDS information to the people and therefore concerted efforts need to be mounted in exploiting such means and expand the reach of HIV/AIDS carrying messages.
- Since misconceptions about HIV transmission are pervasive, continuous IEC and BCC activities are highly desirable at grassroots level to minimize such misconceptions through mass media.
- The younger group of the population appears to have better knowledge than the older ones. Even though this is a sign of success, the latter group also needs adequate knowledge in order to actively participate in the fight against HIV/AIDS.
- Early marriage is found to have made women victims of the HIV pandemic and therefore relevant laws should be enforced to make practical the minimum 18 years of age the legal age of marriage.
- Since poor people possess low level of knowledge about HIV/AIDS as compared to the rich, particular attention has to be directed in educational campaigns to increase their knowledge on the one hand, and existing programs have to be strengthened and new mechanisms introduced to reduce poverty on the other hand.
- Urban women have less likelihood of alcohol consumption than rural women during sexual intercourse. Although this is a desirable practice in the urban setting and needs to be elevated, special effort is needed to change the rural milieu which could have been provoking rural women to delve into the ill-practice of alcohol consumption during sexual intercourse.
- As one of the ABC of HIV prevention methods, being faithful to one uninfected partner stands alone as a realistic method and therefore it would be necessary to step it up in priority as an exercise of trust-honest-faith building among the population though the better educated and economically better-off group have already displayed better faithfulness compared to their counterparts. This in practical terms means countervailing

the culture of being possessed by multiple sexual partnerships through educating people and improving their economic standings.

- The prevailing regional variations with regard to HIV/AIDS prevalence attested to by empirical evidences require, and indeed demand, profoundly localized programmes, strategies and approaches in their own rights in order to address specific socio-economic and cultural factors borne by the rubric of the historical forces of the regions themselves.
 - Empowerment of women through decision making autonomy in the households as well as outside would be a useful instrument to counteract the HIV/AIDS pandemic.
 - HIV is obviously presenting formidable challenges to all walks of life with its ever expanding and deepening manifestations. Therefore, all-round and continuous interventions are called for regarding information dissemination, education and communication as they play a major role in the prevention of HIV/AIDS.

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