

**COMMUNITY AND PERSONAL  
PERCEPTION OF RISK AND VULNERABILITY  
TO HIV INFECTION and AIDS**

**by**

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## Summary of Important Findings

### I. Awareness about HIV/AIDS

- Over 95% of the population is aware of the situation of (*has ever heard about*) HIV/AIDS.
- The radio is the most popular source of information on HIV/AIDS to both the rural and urban population.
- About 12% of the rural population is unaware of (*has never heard about*) the HIV/AIDS problem.
- Availability of radio at home, and literacy/ educational level are the only important determinants of awareness on HIV/AIDS in the rural population.

### II. Knowledge about Transmission and Prevention of HIV/AIDS

- Over 95% of the population think HIV/AIDS can be transmitted from person to person, and over 80% believe that it is possible to prevent transmission of HIV/AIDS.
- Sharing sharp objects such as needles and blades, as well as promiscuity are the most popular means of transmission of HIV infection in the population.
- About 34% of the rural population do not believe that HIV/AIDS is preventable.
- Over 90% of the population believe that the magnitude of the HIV/AIDS problem is high or very high in their respective localities.

### IV. Risk Factors related to HIV/AIDS

- Being male, unmarried or unemployed, as well as urban residence, are identified by the community as the most popular risk factors for HIV/AIDS.
- Prostitution, rape, expansion of bars and local drink sellers, harmful traditional practices and homelessness/ streetism are the most important social and economic conditions associated with the risk of/ vulnerability to HIV/AIDS in the population.
- A high proportion of the population think that they are in a position to protect themselves from HIV/AIDS. In the contrary, however, a much lower proportion of them claim to have made any behavioral changes so as to prevent themselves against the infection.

**III. Perception of Risk and Vulnerability to HIV/AIDS**

- The youth, commercial sex workers and drivers, are considered to be the most vulnerable section of the society. A large proportion of the population also believes that anyone in the community can be vulnerable to HIV/AIDS.
- Over 50% of the population believe that ordinary people (like themselves) could be vulnerable to HIV/AIDS. However, when it comes to perceived self vulnerability, a much lower proportion (25%) of the population actually consider themselves to be vulnerable to HIV/AIDS.
- Among the commonly cited reasons for perceived low or no personal vulnerability are, having limited oneself to one-to-one faithful relationship, avoiding local/ unclean injections, and getting married.
- Assessment of perceived personal vulnerability revealed that more males, those never married, and those who have attended formal education consider themselves vulnerable to HIV/AIDS more than their counterparts.

## Conclusions and Recommendations

- The radio is an important source of information on HIV/AIDS. There is a need to improve the coverage and quality of health message conveyed through the radio.
- Government policy has to permit/ promote the availability of radio at cheaper prices to the rural population in particular.
- The contribution of health institutions and religious organizations in creating awareness and in promoting behavioral changes aimed at reduction of risk and vulnerability of the community needs to be augmented.
- There is a fairly good level of knowledge about the means of transmission and prevention of HIV/AIDS in the population. However, the various means of transmission and prevention of HIV/AIDS still have to be emphasized in the health education sessions on HIV/AIDS.
- The high risk behaviors that increase vulnerability to HIV/AIDS are fairly well understood by a major portion of the community, although there is still a need to maximize this level of awareness among women and the rural population in particular.
- The rural population, women and those unable to read and write, need to be given more attention to be targeted for health education.
- There is a need to promote appropriate risk perception in the general population, with more emphasis to females, married people and those without formal education.
- There are favorable grounds to build IEC efforts related to personal and community perception of risk and vulnerability to HIV/AIDS in both urban and rural populations in the country.

## I. INTRODUCTION

In recent years, there is a growing concern regarding the social, cultural, economic and political causes of HIV infection and the results of this study offer a point of departure for renewed efforts and policy redirection in the future.

Much of the research on the social aspects of AIDS in the last few years has been on building and shaping the social dynamics of HIV infection. The dominant theories and models that have guided early work on HIV/AIDS prevention have been revised, shifting from earlier, more individualistic, information- and education-driven notions on AIDS to more multi-dimensional models of collective empowerment and community mobilization, as potentially more effective long-term responses to the epidemic.

Perhaps the key point of departure for rethinking the approaches that initially guided the response to HIV/AIDS has been a far-reaching reconceptualization of the social dimensions and dynamics of HIV infection. Over much of the first decade of the epidemic, our thinking was largely dominated by a notion of individual risk, a sense of the ways in which specific behaviors (linked to attitudes and beliefs) of particular individuals might open the way for HIV transmission.

The concept of risk rooted in individual behavior has moved to a more collective social configuration. Perhaps the most important transformation in the thinking about HIV/AIDS, during the 1980-1995 period, has been the attempt, by shifting from the notion of individual risk to a new understanding of social vulnerability, to move beyond this contradiction between risk groups and the general population.

Without in any way denying that all human beings are biologically susceptible to HIV infection, or that transmission in fact takes place through the behavioral practices of specific individuals, this expanded concept of social factors, which place some individuals and groups in situations of increased vulnerability, has more fully enabled us to begin to perceive the ways in which social inequality and injustice, prejudice and discrimination, oppression, exploitation and violence continue to function in ways that have accelerated the spread of the epidemic in countries around the world.

If we focus our analysis on social vulnerability, we are able to understand more fully the causal relationship between discrimination and sex workers, the relationship between gender-related power or oppression and women infected with HIV/AIDS, as well as the relationship between social and economical marginalization and AIDS and poverty. To begin to have a perception of the HIV/AIDS through the concept of social vulnerability is a long-term process. It will be the basis on which to build new models of intervention, prevention and education to reduce the AIDS impact, its transmission and social vulnerability.

The study presented here attempts to assess perception of the population concerning the vulnerability of individuals and different socio economic groups to HIV/AIDS.

## II. OBJECTIVES

The aim of this study is to explore and describe how individuals interpret and try to prevent the risk of being infected by HIV.

The two important questions that will be answered are:

1. Why do people behave the way they do with regard to risk and vulnerability?
2. How do we explain people's health behavior and in particular, why people adopt preventive health measures?

The quantitative part of the study addresses the following specific objectives:

- identify and characterize the level of awareness, attitude and risk behavior prevailing among the study population,
- assess the level of perceived risk and vulnerability in the study population.

The qualitative part of the study attempts to explain the social dynamics of HIV transmission in the study population. Hence it is intended to

- identify the social, cultural, and economic factors that affect the transmission of HIV infection,
- identify the social, cultural, and economic factors that place some individuals and groups in situations of increased vulnerability,
- identify the socio-cultural factors affecting the risk perception and vulnerability of individuals,

## III. STUDY METHODS

**Study area:** The study areas (sites) were selected to represent major socioeconomic, ethnic and cultural gradients in the country. Accordingly, Addis Ababa, Debre Berhan, and Hetosa (Arsi) were chosen. Addis Ababa is both a national and regional capital (urban), whereas Hetosa is a predominantly rural district in Arsi Zone. Debre Berhan, on the other hand, is a zonal capital intended to represent an intermediate picture between the two urban and rural settings. Selection of the study areas also took into account logistical feasibility in undertaking the field data collection within a limited period of time.

**Study population:** The source population for the quantitative part of the study was drawn from the general adult population in the reproductive age group 14 – 49 years of age. In the qualitative part of the study special efforts were made to include the 'high-risk groups' such as commercial sex-workers. Accordingly, five internally homogenous groups were identified and targeted for focus-group-discussion (FGD) from each of the three study sites. The groups were composed of: (1) unmarried young males, (2) unmarried young females, (3) married men, (4) married women, and (5) commercial sex workers.

**Study design:** The study had a cross-sectional descriptive design, allowing internal comparison across the three study sites. Both qualitative and quantitative study methods



were employed. Hence, FGDs were conducted to enrich or supplement the information generated through the quantitative methods of data collection. A review of the literature was also made to summarize relevant information from different published and unpublished works in the country.

**Sampling:** Households were used as sampling unit, while individuals in the age group 15-49 years were the actual study population for the quantitative part of the study. A multi-stage cluster sampling technique was applied to identify households that were to be enrolled into the study. All individuals, including guests, in the specified age group and available at home during the household visit were interviewed. A second visit during the same day was arranged for otherwise eligible individuals who were not available at home during the visit.

The sample size was determined not only in accordance with the guidelines for determination of single proportion, but also taking into account the logistical feasibility for undertaking the field data collection. An attempt was also made to maintain a reasonable proportion between the three study sites.

**Data collection:** High school graduates were trained to serve as enumerators and supervisors for the quantitative data collection. The qualitative data were collected by public health experts with substantial training and experience. A structured questionnaire, standardized and pre-tested, was used for quantitative data collection, and an FGD guide was developed for the qualitative data collection.

**Data processing:** Quantitative data were processed and analyzed using the statistical software EPI INFO version 6.03. The qualitative information was compiled and summarized manually.

**Ethical considerations:** Appropriate ethical conduct was maintained throughout the study. Informed consent was sought from the study population during field data collection. Confidentiality of information was ensured, and the study subjects were not identified by name on the questionnaire.

## IV. BACKGROUND INFORMATION

### Description of the Study Sites

#### **Addis Ababa**

Addis Ababa is the capital city of the Federal Democratic Republic of Ethiopia and the major urban center of the country. The Central Statistics Authority estimates the 1998 population of Addis Ababa at about 2.4 million persons, with a population growth rate of 2.9 percent per year. Much of the population growth in the city still stems from migration from the countryside and smaller urban areas. Unemployment is high and incomes are low. The city is also characterized by substandard housing conditions, high infant and maternal mortality rates, inadequate health services and poor sanitation. The presence of large numbers of commercial sex workers aggravates the spread of HIV and other sexually transmitted diseases.

The HIV virus has already infected and is infecting many people in Addis Ababa. An estimated one of every six adults is currently infected, or around 17 percent of the entire adult population of Addis Ababa. This is a staggering level and most of these people do not know that they are infected. Nearly 100 adults in Addis Ababa become infected each day. In addition to 286,000 HIV-infected adults, about 12,000 children are believed to be HIV positive.

The 1999 health service report for Addis Ababa city administration shows that, there are 9 hospitals, 18 health centers, 339 health stations (including 331 private and other GO and NGO clinics) and 21 health posts. The potential health Service Coverage for Addis is 75% while the national being 48.5%.

The 1999 UNAIDS data base on HIV/AIDS NGOs in Ethiopia showed that out of the 44 NGOs with HIV/AIDS related programs 16 are exclusively operating in Addis Ababa and additional 20 are functioning at National level including Addis. Most of the NGOs are involved in preventive activities like IEC for behavioral change, condom promotion and STD control. The UN and bilateral donor agencies are involved in multiple HIV/AIDS prevention and support activities including institutional based clinical care, home/community based care, HIV testing and counseling etc. However, the program focus of most local NGOs in HIV/AIDS prevention and support activities is found to be very minimal.

#### **Debre-Berhan**

Debre-Berhan town is located 130 km northeast of Addis Ababa. It is the capital of North Shewa Zone in the Amhara Regional State. The town is subdivided into nine *Kebeles* (public administration units). It has a temperate climate for the most part of the year. The total population of the town is estimated at 42,384, according to the Zonal Statistics Report of 1998/99. The Orthodox-Christians and Amhara ethnic groups are the predominant religion and ethnicity, respectively, in the town.

The area is known for the production, consumption and export of a highly alcoholic local drink (Arakie or Kati-kala). The town also hosts a popular wool (blanket) producing factory. As a remedy to the cold weather, a large amount of Arakie is known to be consumed throughout weekdays.

As Debre-Berhan town is the seat for zonal administration, the North Shewa Zone Health Department is also located in the same town. There are, however, only a few health institutions in the town. One government owned hospital, and four private clinics operate in the town. There are also three pharmacies and one drug vendor in the town.

There are some non-governmental organizations (NGOs) operating in the town, primarily engaged in capacity building activities to the government owned health facilities and the zonal health department.

Activities relevant to the prevention and control of HIV/AIDS are primarily organized by the zonal health department, and implemented through the hospital, NGOs, and schools. The North Shewa Zone Health Department is responsible for the overall management of health and health related activities in the 18 districts under its control. The activities include, among others, programs for the prevention and control of HIV/AIDS in the town. These activities include, strengthening Anti-AIDS Clubs in schools, condom promotion, provision of training to health workers, Anti-AIDS club members and teaches, government officials, as well as to the elderly and religious people.

Three NGOs are also known to collaborate with the zonal health department and the hospital through financial assistance and also by involving directly in organizing and coordinating programs aimed at the prevention and control of HIV/AIDS.

Debre-Berhan hospital is the only functional government run health institution in the town. The hospital provides HIV/AIDS testing and counseling services to patients suspected of having the infection. It is also involved in health education and distribution of condoms along with other family planning methods. The hospital also coordinates and implements health education sessions to schools, although infrequently.

The Ethiopian Red Cross Society is also actively involved in organizing and implementing Anti-AIDS program activities at schools in the town. The Red Cross Anti-AIDS project focuses on the promotion of information-education-communication (IEC) activities by training volunteer youth in school to be peer-educators on STDs and HIV/AIDS. The peer educators disseminate relevant information by presenting short dramas, songs, role-plays, etc., to school students.

The Population Service International (DKT) is the other NGO involved in condom promotion through the social-marketing approach. It distributes condoms to bars, hotels and small shops (kiosks). It also distributes condoms and family planning pills to private clinics and pharmacies.

The high school and other nine elementary/ junior-secondary schools in the town are also actively involved in IEC activities aimed at the prevention and control of HIV/AIDS. All the schools have functional Anti-AIDS Clubs. The clubs organize dramas, question and answer sessions, and role-plays to enhance prevention and control activities among the school community.

### **Arsi-Hetosa**

Hetosa is one of the 20 districts in Arsi Administrative Zone. It is divided into 42 administrative units, of which 37 are rural *kebeles* (peasant associations), and the rest are urban *kebeles*. Itaya is the capital city of the district. The 1996 population of Hetosa district was estimated at 187,566 of which the urban population constituted 12.7%.

Health services are being rendered through six government owned health stations and many private clinics in Huruta and Itaya towns. The government owned health stations are involved in routine health education activities, which also include topics such as STDs and HIV/AIDS. Occasionally, they are also invited by Anti-AIDS clubs to provide health education at schools.

The health stations also try to deliver health education messages during some public gatherings and meetings. Otherwise, there are no regular programs for IEC or condom promotion in the area. There are no outreach intervention activities to the rural *kebeles*. There are also no organized programs targeting CSWs or any other sector of the population.

Health workers in the area believe that the youth have better awareness about HIV/AIDS and that the prevalence of STDs is decreasing compared to recent years. In Itayyaa Health Station, for instance, STDs were not in the list of top ten diagnoses made during 1999/2000. However, they also noted that during the harvest seasons, a more risky sexual behavior is observed among the youth, which is the result of increased consumption of alcoholic drinks.

More and more people are aware that HIV infection can be transmitted through unclean injections, hence they often request for disposable needles and syringes. However, there are complaints that the private clinics are reusing disposable needles and syringes. As the clinics are not adequately staffed, there are rumors about untrained staff like, cleaners and guards being involved in provision of injections.

The local health officials also blame local (traditional) practitioners for using contaminated blades and other sharp instruments during tooth extraction, uvulectomy and similar harmful traditional surgical practices.

## V. RESULTS (Quantitative Survey)

### 1. Description of the Study Population

A total of 1913 individuals in the age group 15-49 years were successfully interviewed from the three study sites. Over half of the study population was drawn from the urban sample (Addis) while the remaining were contributed equally by Debre-Berhan and the rural (Hetosa) samples.

The age and sex distribution of the study population reveals that the majority is female (55%), and those in the age group 15 - 34 constitute about 78%. About 85% of the study population is composed of heads of households, housewives, daughters or sons. The majority (55%) have never been married.

Orthodox Christians constitute 80% of the study population followed by Muslims (14%). Amharas, Oromos and Guraghes are the major ethnic groups represented in the study, accounting for 54%, 28% and 11% respectively, of the study population. In the rural sample, 70% were Oromos while the remaining were Amharas. Similarly, the urban-semi-urban sample was largely dominated by the Amhara ethnic group, which makes up over 90%. The urban sample from Addis was more heterogeneous, consisting of Amharas (48%), Oromo (21%), and Guraghe (20%)

Over 75% of the study population reported having attended had formal education upto elementary or high school level. A large proportion of the rural sample (25%) was unable to read and write, in contrast to only 6-7% from the urban/ semi-urban samples.

The distribution of the study population by occupation reveals that 40% were students or jobless, while another 30% were farmers or housewives. The proportion of farmers and housewives was much higher in the rural sample, 48% and 26%, respectively.

### 2. Awareness about HIV/AIDS

While the majority (95%) of the study population reported being aware of HIV/AIDS, about 5% claimed that they have never heard about HIV/AIDS before. The proportion of those who are unaware was higher in Hetosa 12%, than in Debre-Berhan or Addis, 4% and 3% respectively. (Please see Table 1 below.)

**Table 1. Pattern of awareness to HIV/AIDS in the three study sites.**

	<i>Number (%)</i>	<i>Chi-square</i>	<i>P-value</i>
<b>Unaware of HIV/AIDS</b>			
<b>Addis Ababa</b>	25 (2.5)		
<b>Debre-Berhan</b>	16 (3.6)		
<b>Arsi-Hetosa</b>	53 (11.7)	59.69	0.0000

The radio was by far the most popular information source on HIV/AIDS in all the three study sites. Television is reported to be the second common source of information in the urban and semi-urban samples. Friends (25%) and school (18%) constitute the second and third common sources of information on HIV/AIDS in the rural sample.

A large proportion of the study population mentioned multiple sources of information on HIV/AIDS. Likewise, two sources were reported by 61%, three sources were mentioned by 30%, and four sources of information were reported by 9.2% of the study population.

In the rural population, the availability of radio at home and literacy level were the only determinants of awareness to HIV/AIDS (*Please see Table 2 below.*)

**Table 2. Determinants of HIV/AIDS awareness in Arsi-Hetosa.**

	<i>Aware on HIV/AIDS # (%)</i>	<i>OR</i>	<i>(95% C.I.)</i>
<b>Radio</b>			
<b>Not available</b>	168 (88.4)		
<b>Available</b>	241 (96)	3.16	(1.38, 7.35)
<b>Education level</b>			
<b>Unable to read/ write, no formal education</b>	118 (82.5)		
<b>Formal education (primary, secondary or higher level)</b>	280 (90.9)	2.12	(1.14, 3.93)

### 3. *Knowledge about Transmission and Prevention of HIV/AIDS*

Over 95% of the study population agreed that HIV/AIDS was transmittable from person to person. Similarly, the majority agreed that it was possible to prevent transmission of HIV/AIDS. However, a considerably higher proportion of the rural respondents replied that HIV/AIDS is not preventable. (*Please see Table3 below.*)

Sharing sharp objects such as needles and blades, as well as promiscuity (premarital/ extramarital sexual encounter) were considered the most popular means of transmission of HIV infection cited by the study population. However, it is worth noting the proportion of study population who failed to mention these sources. Sharing sharp objects, for example, was not mentioned by about 34% of the study population.

Multiple means of transmission of HIV/AIDS were mentioned by a considerably high proportion of the study population. Accordingly, 81% mentioned two means of transmission, 37% mentioned three means of transmission, and 12% reported four means of transmission of HIV/AIDS.

**Table 3.**  
**Opinion of study population concerning transmissibility and/ or preventability of HIV/AIDS**

	<i>Agreement Number (%)</i>	<i>Chi-square</i>	<i>P-value</i>
<b>Transmissibility</b>			
<b>Addis-A</b>	951 (95.3)		
<b>Debre-B</b>	409 (96.5)		
<b>Arsi-Hetosa</b>	371 (93.0)	5.55	0.062
<b>Preventability</b>			
<b>Addis-A</b>	864 (87.1)		
<b>Debre-B</b>	377 (89.1)		
<b>Arsi-Hetosa</b>	260 (65.8)	105.29	0.0000

In the same manner, the most popular means of prevention of HIV/AIDS reported by the study population were, one-to-one faithful relationship (76%), using condoms (43%), and avoiding local injections with unclean materials (24%).

About 65% of the study population mentioned two different means of prevention of HIV/AIDS, while another 21% mentioned three means of prevention each.

**Table 4. Reported means of transmission and prevention of HIV/AIDS**

	<i>Number (%)</i>
<b>Means of Transmission</b>	
Sharing blades/needles with infected persons	1130 (66.0)
Promiscuity or sex with CSWs	626 (36.5)
Premarital sex	486 (28.4)
Extramarital sex	462 (30.0)
Sex with AIDS patient	450 (26.3)
Receiving infected blood	317 (18.5)
<b>Means of Prevention</b>	
One-to-one faithful relationship	1132 (75.8)
Using condoms	648 (43.4)
Avoiding local injections with unclean materials	351 (23.5)
Abstinence	275 (18.4)
No sex with commercial sex workers	176 (11.8)
Avoiding blood transfusion	45 (3.0)
Other	145 (9.7)

#### 4. *Perceived magnitude of the HIV/AIDS problem*

The study subjects were asked to rate the magnitude of the HIV/AIDS problem in their respective locality. In response, it was learnt that over 78% of the population consider the problem as having a 'very high magnitude', while another 13% said it has a 'high magnitude' in their respective localities.

**Table 5.**  
**Perceived magnitude of the HIV/AIDS problem in the study sites.**

<i>Magnitude of the HIV/AIDS problem</i>	<i>Number (%)</i>
<b>Very high magnitude</b>	1421 (78.2)
<b>High magnitude</b>	232 (12.8)
<b>Not a serious problem</b>	36 (2.0)
<b>Don't know</b>	129 (7.1)

#### 5. *Perception of Risk and Vulnerability to HIV/AIDS*

There are similarities in the reports from the three study sites concerning the community groups that are perceived to be more vulnerable to HIV/AIDS. Accordingly, the youth, commercial sex workers and drivers, in the same order, were reported to be the most vulnerable. In the rural and urban/semi-urban sample, people involved in multi-partner sexual relationships were considered the fourth most vulnerable group, while students ranked fourth in the urban sample. The fifth ranking reply across the three study sites indicates that everyone in the population is vulnerable to HIV/AIDS. (Table 6)

Over 50% of the study population agreed that people like themselves could be vulnerable to HIV/AIDS. But, the proportion agreeing that they themselves were vulnerable decreased significantly from urban to rural areas. In the same manner, it was attempted to assess the level of perceived personal vulnerability through a question directed specifically to the respondent. Likewise, it was revealed that a much lower proportion (25%) of subjects actually considered themselves vulnerable to HIV/AIDS. Moreover, the level of perceived personal vulnerability was similar across the three study sites. (Table 7)

Among the commonly cited reasons for perceived low or no personal vulnerability are, limiting oneself to one-to-one faithful relationship, avoiding unclean injections, and getting married.



**Table 6.**  
**Top six community groups considered more vulnerable to HIV/AIDS**

<i>Vulnerability Rank</i>	<i>Addis-A 3 (%)</i>	<i>Debre-B 3 (%)</i>	<i>Iteya 3 (%)</i>	<i>All 3 (%)</i>
<b>Youth</b>	194 (21.5)	273 (66.3)	191 (54.0)	1080 (64.9)
<b>Commercial sex workers</b>	279 (30.9)	192 (46.6)	176 (49.7)	646 (38.8)
<b>Drivers</b>	105 (11.6)	58 (14.1)	72 (20.33)	224 (13.5)
<b>Promiscuous people</b>	60 (6.7)	56 (13.6)	71 (20.1)	187 (11.2)
<b>Anyone</b>	101 (11.2)	44 (10.7)	43 (12.14)	186 (11.2)
<b>Students Others</b>	117 (13.0)	32 (7.8)	27 (7.6)	174 (10.5)

On the contrary, the most frequent reason for personal perception of moderate/ high vulnerability include the fact HIV/AIDS has multiple means of transmission so that one can not feel certain of being protected, the feeling of insufficient self protection against infection. Other group of individuals also reported that they had not limited themselves to a one-to-one faithful relationship, hence felt more vulnerable (less protected).

**Table 7.**  
**Perceived vulnerability of other people/ self as reported by the study population**

	<i>Perceived Vulnerable Number (%)</i>	<i>Chi-square</i>	<i>P-value</i>
<b>People like you</b>			
<b>Addis-A</b>	678 (68.3)		
<b>Debre-B</b>	258 (61.3)		
<b>Arsi-Hetosa</b>	215 (54.4)	26.39	0.0000
<b>Yourself</b>			
<b>Addis-A</b>	262 (26.6)		
<b>Debre-B</b>	101 (24.2)		
<b>Arsi-Hetosa</b>	92 (23.1)	2.23	0.328

**Table 8.**  
**Selected socio-demographic determinants of risk perception and Personal vulnerability to HIV/AIDS**

	<i>Vulnerable # (%)</i>	<i>OR</i>	<i>(95% C.I.)</i>
<b><i>Sex</i></b>			
<i>Male</i>	231 (27.9)	1.29	(1.04, 1.61)
<i>Female</i>	224 (23.0)		
<b><i>Marital status</i></b>			
<i>Never married</i>	278 (27.7)	1.34	(1.07, 1.68)
<i>Married/divorced/widowed/ etc.</i>	177 (22.2)		
<b><i>Literacy/education</i></b>			
<i>Unable to read and write</i>	51 (18.9)	0.65	(0.46, 0.92)
<i>Formal education</i>	403 (26.3)		

**Table 9. Reasons for perceived/ reported level of vulnerability to HIV/AIDS**

<i>Reasons for perceived level of vulnerability to HIV/AIDS</i>	<i>Number (%)</i>
<b>Perceived low or no vulnerability</b>	
Limited to one-to-one faithful relationship	374 (37.8)
No local injections	174 (19.0)
Married	147 (16.0)
Never had sex	107 (11.7)
Stopped sexual encounter	97 (10.6)
Started to use condoms	83 (9.0)
No sex with commercial sex workers	53 (5.8)
Other reasons	116 (12.6)
<b>Perceived moderate or high vulnerability</b>	
Multiple means of transmission of disease, lack of certainty/ awareness, lack of protection	148 (44.3)
Not limited to one-to-one relationship	62 (18.6)
Young age, temptation to sex	25 (7.5)
No trust in husband/ sex partner	25 (7.5)

A selected set of socio economic conditions were presented to the study population so as to obtain their assessment regarding association of these factors with risk of or vulnerability to HIV/AIDS. As a result, seven of the fifteen conditions were identified by over 75% of the study population, as being associated with vulnerability to HIV/AIDS. (Please see Table 10 below).

**Table 10.**  
**Ranking of condition possibly associated with risk of/ vulnerability to HIV/AIDS**

<i>Conditions/ factors ranked</i>	<i>Addis-A (%)</i>	<i>Debre-B (%)</i>	<i>Hetosa (%)</i>	<i>All # (%)</i>
	<b>(N = 996)</b>	<b>(N = 424)</b>	<b>(N = 399)</b>	<b>(N = 1819)</b>
<b>Prostitution</b>	(96.4)	(97.4)	(95.5)	1748 (96.5)
<b>Forceful sexual assault (rape)</b>	(92.6)	(92.5)	(89.7)	1667 (91.9)
<b>Expansion of bars and local drink sellers</b>	(91.0)	(89.9)	(85.7)	1624 (89.6)
<b>Harmful traditional practices</b>	(88.0)	(91.0)	(77.4)	1567 (86.4)
<b>Homelessness, streetism</b>	(83.4)	(80.9)	(81.2)	1493 (82.3)
<b>Expansion of video houses and night clubs</b>	(86.6)	(75.2)	(57.4)	1407 (77.6)
<b>Expansion of drug use</b>	(85.7)	(74.8)	(53.6)	1380 (76.1)

### 7. *Perceived magnitude of premarital and extramarital sexual encounter*

In an attempt to assess the magnitude of some selected sexual behaviors among the study population the study subjects were asked to describe the magnitude of such practices as high, low, moderate, etc. It was learnt that premarital sexual encounters are practiced among both young boys and girls, although the magnitude was rated much higher in boys. About 70% and 59% of respondents, respectively, replied that they think young boys and girls are involved in premarital sexual encounters.

Similarly, 42% of the respondents said that extramarital sexual encounters are very common among married men while another 32% said it has a low prevalence. In contrast only 29% of the study population think that married women are involved in extramarital sexual affairs. About 40% of respondents feel that the proportion of women involved in extramarital sexual encounters is rather low.

About 66% of the study population think that forceful sexual intercourse (rape) is a widespread phenomenon in their locality.

The study population was also asked to compare the vulnerability level between a pair of related sections of the population. This exercise revealed the prevailing assumption in the community concerning the vulnerability level of some groups of the population. Accordingly, it was observed that unmarried and unemployed individuals are considered more vulnerable to HIV/AIDS than their counter parts. Similarly, husbands are rated more vulnerable than their wives. Urban residents were also considered to be more vulnerable than rural residents. Out-of-school youth, and youth not living with their parents are considered to be more vulnerable to HIV/AIDS than school youth (students) and youth living with their parents, respectively.

On the other hand, young boys and girls are considered equally vulnerable to HIV/AIDS. In the same manner, the rich and poor, as well as Christians and Muslims are considered equally vulnerable. (*Please see Table 11 below*).

**Table 11.**  
**Comparative assessment of vulnerability of different community groups.**

<i>Vulnerability Factors</i>	<i>Higher/ Lower</i>	<i>Equal (both)</i>
<b>Marital status</b> Unmarried Married	74.9 10.4	11.8
<b>Employment</b> Unemployed Employed	54.0 16.7	22.2
<b>Economic status</b> Rich Poor	29.1 25.7	36.0
<b>Religion</b> Christian Muslim	27.9 8.4	40.9
<b>Residence</b> Urban Rural	62.7 15.5	18.4
<b>Sex/marital status</b> Husbands Wives	52.2 8.0	28.6
<b>Age/sex</b> Young males Young females	21.9 14.1	58.3
<b>School attendance</b> Out-of-school youth School youth	44.2 21.9	27.2
<b>Living with parents</b> Youth not living with their parents Youth living with their parents	69.8 5.2	21.0

Note. In each pair of groups compared, the percentage deficits (to 100%) are accounted for by replies of “I don’t know”.

## 8. *Protection against HIV/AIDS*

A considerably high proportion of the study population believes that they are capable of protecting themselves from HIV/AIDS. However, a smaller proportion reported having made any behavioral changes in protection against HIV/AIDS. Some of the changes made in sexual behavior include limiting oneself to a one-to-one faithful relationship, avoiding local (unclean) injections, using condoms, and avoiding sexual encounters (abstinence).

**Table 12.**  
**Self efficacy in protection against HIV/AIDS**

	<i>Number (%)</i>
<b>Perceived ability to protect oneself from HIV/AIDS</b>	
Able to protect oneself	1451 (80.5)
Unable to protect oneself	95 (5.3)
Don't know	58 (3.2)
God knows	191 (10.6)
Other	8 (0.4)
<b>Any behavioural changes made so far in protection against HIV/ AIDS</b>	
Yes	1077 (60.4)
No	502 (28.3)
Other (no changes required, already careful)	204 (11.4)
<b>Any changes in sexual behavior, if any</b>	
Limited to one-to-one relationship	438 (42.0)
No local injections	190 (18.2)
Started to use condoms	182 (17.4)
Stopped sexual encounter	158 (15.1)
Got married	133 (12.7)
No sex with commercial sex workers	93 (8.9)
Other	136 (22.6)

## VI. RESULTS: (Qualitative)

### 1. *Ranking Socio-economic and Health Problems*

Poor environmental sanitation was top in the list of major health and social problems reported during the FGDs in Addis Ababa. Lack of proper facilities for the disposal of solid and liquid wastes is considered to have created a serious health hazard.

In Debre-Berhan also the unmarried young men group rated the HIV/AIDS problem next to poor environmental hygiene and harmful traditional practices. Whereas, the young females put it as a top priority explaining that it is not curable and that it is spreading at an alarming rate.

Married women in Debre-Berhan ranked HIV/AIDS as the top problem in the list of problems such as poverty, Tuberculosis, childhood illnesses, unemployment, high population growth and illiteracy. Married men in the same area, most of whom are daily laborers, also gave top priority to the HIV/AIDS problem stating “What is more important than life?”. They also mentioned conditions such as poverty, unemployment, poor environmental sanitation, poor health service delivery, high population growth, and famine.

Similarly, unemployment, illiteracy, overpopulation and drug abuse were also mentioned as important health and social problems.

The health and social problems are known to be interrelated and contributing to vulnerability to HIV/AIDS. In this regard, the discussants said, *“unemployment forces the youth to waste their time in ‘Khat’ chewing, alcohol drinking and ‘hashish’ smoking. This increases the sexual arousal leading to unprotected and unsafe sex. Following such ceremonies as khat chewing, the youth are engaged in group sex (many boys having sex with a single girl). They totally forget the existence of HIV/AIDS”*

Some youth have also incriminated overpopulation to be the root cause of poverty and unemployment, which in turn expose the youth to substance abuse and its health consequences.

Married men also have a similar opinion to unmarried youth about the socio-economic and health problems prevalent in the area. However, they additionally mentioned lung diseases (samba beshita) which is often attributed to exposure to cold weather (berd beshita) to be a common health problem. In the same manner, skin lesions caused by herpes zoster (locally known as Almaz-balechira, and considered to be caused by insect bite) is reported to be a common problem.

“More and more people are dying after being emaciated (bone and skin) and pulmonary tuberculosis is becoming incurable. People suspect that non-curable lung disease is associated to HIV/AIDS ”.

Due to the stigma attached, people are not comfortable talking about HIV/AIDS. Even if they know someone has the disease they are afraid to disclose such information. Whereas, it is known that a lot of young people, particularly females, are dying possibly due to HIV/AIDS. Patients with AIDS are usually isolated and visitors may not be allowed in.

## **2. Perception of Risk and Vulnerability to HIV/AIDS**

During most of the FGDs in Debrebirhan, HIV/AIDS was described as a disease that “*doesn't come to people, unless people go for it*”, emphasizing the fact that it is avoidable/ preventable.

The discussants invariably said that the youth are the most affected segment of the population, due to their emotional and ‘highly sexual’ behavior. It was explained that the youth would like to try and explore new things. They are also susceptible to alcoholism, drug addiction and sexual coercion.

Young people, both males and females, are known to have multiple sexual partners.

“Female students usually have one ‘boyfriend’ or lover at school and another ‘bodyguard’ in their residential area.”

Next to the youth children are also considered among the most affected. The reason appears to be a misconception that children play with used condoms.

On the other hand, married couple, religious people particularly protestants, and people older than 50 were among the least to be affected as mentioned by the discussants.

It was pointed out during the discussions in Debreberhan that no one is spared from the HIV/AIDS problem, rather everyone in the community, including married couple and children are affected. However, commercial sex workers, street-people (homeless), and students were grouped as having high risk for acquiring the infection, whereas, civil servants and health workers were considered to possess relatively low risk. The young females’ group identified uneducated rural people to be the most vulnerable, due to lack of awareness about the problem, the youth due to their emotional behavior, and CSWs due to their peculiar occupation. Students were labeled as the low risk group.

In Addis Ababa, married couple, those who abstain from sex, followers of the wholly bible, and those who are limited to one-to-one relationship are considered to be at low risk to the HIV/AIDS problem.

The married men group in Debrebirhan identified CSWs, drivers, unmarried men and youth as the most affected groups.

## **3. Social, Cultural or Religious Factors that affect Vulnerability to HIV/AIDS**



All the discussants reiterated that poverty, unemployment, and overpopulation are some of the reasons that increase vulnerability to HIV/AIDS through enhancing prostitution, illiteracy and drug abuse. Poverty, drug use and alcoholism are mentioned by the married men group as important risk factors as well.

In the discussion with unmarried youth in Debreberhan, harmful traditional practices and poverty were mentioned as the main aggravating factors for the epidemic. Prostitution, for instance was termed as the result of poverty and as being 'a struggle for survival'.

The high cost of condoms particularly at night was also mentioned to be beyond the financial capacity of the youth, forcing them into unprotected sexual intercourse. The married men also said that poor people are unable to purchase condoms, and they engage in unsafe sex. But still others think that even those who are not poor are at risk because they do not use condoms.

Some of the married men discussants think that poverty is not necessarily a predisposing factor as young people from rich families are also known for their promiscuous behavior. They said that youngsters from such families are proud of the number of sexual partners they have.

“The youth in general and female youth in particular, do not feel free to discuss about condoms due to cultural taboos, and hence, most are unable to use condoms properly.”

Some participants also mentioned that religious practices such as polygamous marriage among the Moslems can be a risk factor for the transmission of HIV/AIDS. On the other hand, the Orthodox Christian religion by prohibiting (discouraging) the use of condoms and by promoting child birth, also contributes to transmission of the disease. However, some of the participants argued that the Orthodox Christian religion preaches a one-to-one faithful relationship within marriage, which has a favorable effect.

The married women group in Debrebirhan incriminated both poverty and wealth as increasing vulnerability to HIV/AIDS. On the other hand, education, employment, marriage, religion, and one-to-one relationship are viewed among the socio economic and cultural assets that decrease transmission of HIV. It is widely believed among this group that drinking the 'holly-water', and 'religious-marriage', heal or protect against AIDS.

#### **4. *Magnitude of Harmful Habits***

All the discussants agreed that Caht chewing, alcohol drinking, premarital sexual encounter, and prostitution are highly prevalent in their localities. They tried to quantify the prevalence of such practices as ranging from 75% to 90% among the youth. Some of them said that about 10% of the female youth are prostitutes.

All of them said that the youth are engaged in unprotected group-sex following substance use. Males also drink local drinks such as 'araki' or 'katikala' and engage themselves in

unprotected sex with prostitutes. They also reported that sex without condom costs more than sex with the use of condom.

The married men discussants also shared the idea that young people are predisposed to HIV/AIDS due to drug addiction, alcoholism and joblessness, which lead them into unprotected sex. They reported that khat chewing, alcoholism, premarital sex, sexual violence and prostitution are rampant in their areas. The number of khat selling shops is growing by the day, and there is a continuous peer pressure on young people to chew khat.

The young females from Debrebirhan also mentioned that promiscuity, extramarital or premarital sexual affairs, alcoholism (consumption of local drinks such as 'Arakie' or 'Tella') and prostitution are widespread practices in their locality, increasing the transmission of HIV/AIDS.

The married women group in Debrebirhan reported that consumption of local drinks, premarital sex and prostitution are widespread practices in their locality, making the largest contribution to the spread of HIV/AIDS. However, they don't think that extramarital sex is a common practice. On the other hand, khat chewing, pornography, rape and streetism were reported to be uncommon in the area.

##### **5. *Source of Information on HIV/AIDS***

Mass media, schools, health institutions and celebrations of the 'World AIDS' are mentioned to be the common sources of information of HIV/AIDS to the youth. In Debrebirhan too, School anti-AIDS clubs, health institutions and the mass-media were reported as the most common sources of information, the later being more preferred.

The discussants in Addis said that although there is sufficient information on HIV/AIDS, it has not brought about the required behavioral changes. Some people even think that AIDS does not exist, while others say that HIV is found in the condom itself.

The married men discussants also expressed the opinion that young people think that condoms neither prevent HIV/AIDS nor are they pleasant to use. They also share the suspicion that condoms could be the source of the problem. They mentioned that health institutions, the mass-media, religious institutions and schools are the usual sources of information on HIV/AIDS. The preferred sources of information on HIV/AIDS, according to the married men, are reported to be health institutions, as people living with HIV/AIDS sometimes participate in the IEC activities.

The main source of info on HIV/AIDS for the women in Debrebirhan was mentioned to be the National Radio. Whereas, most women prefer the health institutions/ health workers as a source of info. Some women pointed out that they learned about AIDS by seeing patients suffering from the disease at health institutions. On the other hand, married men in the same area reported the church to be the preferred source of info on HIV/AIDS. The radio was another preferred source next to the church.

## **6. *Modes of Transmission of HIV/AIDS***

All participants agreed that promiscuous sexual behavior especially among youngsters is the principal route of transmission of HIV/AIDS. Sexual intercourse among the youth typically occurs following intoxication with alcohol or hashish smoking. Married men also share the same opinion. Whereas, the young females group in Debrebirhan also mentioned pregnancy, breast feeding and blood transfusion as possible means of transmission too.

Sharp objects, needles and carelessly disposed used condoms were also mentioned as possible routes of transmission of HIV/AIDS. Most of the young females in Debrebirhan also emphasized that unsafe disposal of condoms could transmit the infection to children, as they play with it.

Most discussants were of the opinion that traditional medical practitioners might have a role in the transmission of HIV/AIDS as they use a single needle or sharp object repeatedly for different subjects. The married men group ranked traditional surgical practices such as uvulectomy and circumcision as the second most important means of spreading the HIV infection.

Of interest to preventive health programs is that some women in Debrebirhan also mentioned that children can get the disease through vaccination or other injections. On the other hand, misconceptions such as transmission of infection to children through disposed (used) condoms, and from eating egg and un-inspected meat (beef) were also cited by the women.

The married men group in Debrebirhan strongly believes that eating un-inspected meat (beef) and chicken-egg can transmit the infection as cattle and chicken may ingest semen from disposed (used) condoms. They cited an example of a 'monk getting HIV infection' supposedly from eating eggs. Some of the group members also mentioned that HIV could be transmitted by eating food prepared by an infected person.

## **7. *FGD with Commercial Sex Workers***

During the discussion about the prevailing health and social problems in the area, poor environmental sanitation and lack of clean latrine were mentioned among the top priority problems. Some of the discussants tried to relate poor latrine/ environmental conditions with diseases like bronchial asthma, and common cold. Whereas, other women mentioned that sexually transmitted diseases such as vaginal discharge (gonorrhea) or itching over the vulva could result from a dirty toilet.

All the participants of the discussion shared the opinion that sewer and liquid wastes accumulated in their residential area can possibly transmit HIV infection via flies. It was explained that flies come in contact with sewer and liquid wastes that could be

contaminated by menstrual blood. If such flies contaminate the food, then it is possible that contaminated blood is ingested. This blood is believed to cause the infection.

Other misconceptions concerning the means of transmission of STDs and HIV/AIDS were also noted during the same discussion. One of the participants mentioned that condoms are effective in the prevention of HIV infection but not other STDs, as HIV is transmitted through infected blood while the rest of the STDs are transmitted through body contact only. Another women also said that AIDS is transmitted from one person to another only if the two individuals have a similar blood type. However, this idea was opposed by another lady who stressed that AIDS is transmitted regardless of the blood type, especially when people fail to take the necessary precautions.

CSWs in Debrebirhan labeled the HIV/AIDS problem as the number one enemy. *“It has deprived as of earning a living”* said one of the discussion participant. It was rated as the leading national problem followed by poverty and unemployment. They identified CSWs, drivers, students and the youth as the most vulnerable group of the population. However, they also expressed the concern that unmarried people are also affected at an increasing rate. One of them said, *“these days the disease is worsening among married couples”*

The CSWs also ranked young people in the age group 15 – 25 as the group most vulnerable to HIV/AIDS. Whereas, drivers, married men and adults in the age group 30-40 years were generally grouped in the medium risk category. People with religious affiliation, children, (virgin) girls, doctors, and people limited to a faithful marriage were said to have low vulnerability to HIV/AIDS compared to others.

Concerning the means of transmission of HIV/AIDS, invariably all discussants pointed out sexual intercourse as the primary means. Whereas, blood, sharp objects, flies, feeding utensils used by infected persons like cups, dishes, spoons and plates were also mentioned as important means of transmission. Similarly, sharp objects used by traditional healers for surgical practices like uvula cutting, tonsillectomy, scratching of the throat, and circumcision were some of the means of transmission mentioned. Induced abortion (criminal) was one of the social conditions considered to be predisposing to infection. There seems to be an agreement in the opinion that contact to open sores (fresh wounds) could also transmit the infection.

The CSWs in Debrebirhan identified the top three means of HIV transmission as sexual intercourse, unclean needles blades and injections, and blood contact. However, they also believed that HIV can be transmitted by touch or while sharing clothes.

Harmful habits like Khat chewing, “hashish” smoking, drinking alcohol, as well as, premarital/ extramarital sex, prostitution and sexual violence were reported to be widespread in the locality. All the discussants agree that chat chewing is followed by alcohol drinking and increased sexual desire. However, people in this condition do not like to use condoms. One of the discussants said, *“once they are drunk, they don’t like to use a condom even if I tell them that I have the HIV.”* Another CSWs said that she is

beaten when she refuses sexual intercourse without condoms. Others also agreed that this is a common problem.

The CSWs in Debrebirhan also pointed out alcohol consumption as the most important, among the harmful habits, predisposing factor for the practice of unprotected sexual intercourse and the subsequent infection. Extramarital sex, and prostitution, pornography were also recognized among the major contributing factors.

Another discussant said, “older men say they have difficulty of erection even when they see a condom or when they are asked to use one.” Most of the CSWs complained that men deliberately tear the condom during intercourse.

One of the CSWs shared her experience that once she went to a client’s house, where the person smoked something which made her lose consciousness. She was then involved in unprotected sex. Another one also mentioned that men offer her more money for unprotected sex (without condom).

During the discussion in Debre-Berhan, both poverty and wealth, extramarital sexual relationships such as having mistresses (traditionally known as ‘kimit’), and following new religions were mentioned among the socio economic and cultural factors that promote transmission of the infection. Similarly, diseases such as tuberculosis and STDs, as well as traditional surgical practices like uvula cutting and throat curettage (scratching), were mentioned as conditions contribution to transmission of the HIV infection.

Concerning the source of information on HIV/AIDS, TV, radio, and health institutions were mentioned as the common sources. Infrequently, friends are also a source of info. Although the most accessible source of info on HIV/AIDS are the mass-media, health institutions are the preferred ones.

The radio and TV (dramas in particular) are very accessible and fairly preferred sources of information on HIV/AIDS to the CSWs in Debrebirhan.

**ANNEX I List of Tables by Study Site**

**Table**  
**Socio-demographic characteristics of the study population by locality**

	<b>Addis A</b>	<b>Debre B</b>	<b>Hetosa</b>	<i>All</i>	
	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>	<b>#</b>	<b>(%)</b>
<b>Sex</b>					
Male	431 (42.3)	217 (49.2)	225 (49.8)	873	(45.6)
Female	589 (57.7)	224 (50.8)	227 (50.2)	1040	(54.4)
<b>Relation to household</b>					
Head	138 (13.5)	105 (23.8)	126 (27.9)	369	(19.3)
Wife	182 (17.8)	85 (19.3)	163 (36.1)	420	(22.0)
Daughter	270 (26.5)	73 (16.6)	63 (13.9)	406	(21.2)
Son	254 (24.9)	85 (19.3)	89 (19.7)	428	(22.4)
Relative	68 (6.7)	49 (11.1)	10 (2.2)	127	(6.6)
Housemaid	42 (4.1)	18 (4.1)	7 (1.5)	67	(3.5)
Other	66 (6.5)	26 (5.9)	4 (0.1)	96	(5.0)
<b>Marital status</b>					
Never married	664 (65.1)	231 (52.4)	157 (34.7)	1052	(55.0)
Married	285 (27.9)	161 (36.5)	277 (61.3)	723	(37.8)
Widowed	27 (2.6)	5 (1.1)	6 (1.3)	38	(2.0)
Divorced	27 (2.6)	36 (8.2)	10 (2.2)	73	(3.8)
Separated	13 (1.3)	8 (1.8)	2 (0.4)	23	(1.2)
Other	4 (0.1)	0	0	4	(0.2)

... continued

**Table**  
**Socio-demographic characteristics of the study population by locality**

	<b>Addis A</b>	<b>Debre B</b>	<b>Hetosa</b>	<b>All</b>	
	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>	<b>#</b>	<b>(%)</b>
<b>Religion</b>					
Orthodox Christian	812 (79.6)	396 (89.8)	329 (72.8)	1537	(80.4)
Muslim	126 (12.4)	17 (3.9)	117 (25.9)	260	(13.6)
Protestant	67 (6.6)	24 (5.4)	6 (1.3)	97	(5.1)
Catholic	6 (0.6)	1 (0.2)	0	7	(0.4)
Other	8 (0.9)	3 (0.7)	0	11	(0.6)
<b>Ethnicity</b>					
Amhara	484 (47.6)	402 (91.2)	135 (29.9)	1021	(53.5)
Oromo	213 (20.9)	15 (3.4)	315 (69.8)	543	(28.4)
Guraghe	198 (19.5)	11 (2.5)	0	209	(10.9)
Tigre	58 (5.7)	6 (1.4)	0	64	(3.4)
Other	64 (6.3)	7 (1.6)	2 (0.4)	73	(3.8)
<b>Educational status</b>					
Unable to read/ write	65 (6.4)	29 (6.6)	113 (25.1)	207	(10.8)
Able to read and write (no formal education)	49 (4.5)	34 (7.7)	30 (6.7)	113	(5.9)
Elementary education	183 (17.9)	63 (14.3)	161 (35.7)	407	(21.3)
High-school	624 (61.2)	281 (63.7)	138 (30.6)	1043	(54.6)
Other	99 (9.7)	34 (7.0)	9 (2.0)	142	(7.4)
<b>Occupation</b>					
Student	205 (20.2)	126 (28.6)	66 (14.6)	397	(20.8)
Jobless	285 (28.0)	58 (13.5)	22 (4.9)	365	(19.1)
Housewife	170 (16.7)	54 (12.24)	118 (26.1)	342	(17.9)
Peasant (farmer)	2 (0.2)	5 (1.1)	217 (48.0)	224	(11.7)
Trader (merchant)	76 (7.5)	55 (12.5)	7 (1.5)	138	(7.2)
Gov't. employed	73 (7.2)	60 (13.6)	3 (0.7)	136	(7.1)
Daily laborer	19 (1.9)	23 (5.2)	3 (0.7)	45	(2.4)
Local drink seller	13 (1.2)	14 (3.2)	4 (0.9)	31	(1.6)
Driver or assistant	16 (1.6)	2 (0.9)		20	(1.1)
Construction worker	5 (0.5)	5 (1.1)		10	(0.5)
Other	153 (15.0)	37 (8.4)	12 (2.7)	202	(10.6)

**Table**  
**Information (awareness) on HIV/AIDS by locality**

	<b>Addis A</b> <b># (%)</b>	<b>Debre B</b> <b># (%)</b>	<b>Hetosa</b> <b># (%)</b>	<i>All</i> <b>#</b>	<b>(%)</b>
<b>Ever heard about AIDS</b>					
Yes	995 (97.5)	425 (96.4)	399 (88.3)	1819	(95.1)
Never	25 (2.5)	16 (3.6)	53 (11.7)	94	(4.9)
<b>Usual source of information on HIV/AIDS</b>					
Radio	885 (89.0)	380 (89.4)	304 (78.2)	1569	(86.5)
Television	476 (49.9)	142 (33.4)	28 (7.1)	652	(36.0)
Newspaper or magazine	77 (8.1)	84 (19.8)	29 (7.3)	316	(17.4)
School	136 (14.3)	65 (15.3)	69 (17.5)	270	(14.9)
Friends	72 (7.5)	52 (12.2)	98 (24.9)	222	(12.2)
Health institutions/ workers	83 (8.7)	53 (12.5)	17 (4.3)	158	(8.7)
Neighbors	41 (4.3)	23 (5.4)	70 (17.8)	137	(7.6)
Leaflets or posters	57 (6.0)	29 (6.8)	6 (1.5)	92	(5.0)
Anti-AIDS clubs	19 (2.0)	17 (4.0)	11 (2.8)	47	(2.6)
Family members	16 (1.7)	10 (2.4)	8 (2.0)	35	(1.9)
Religious institutions/ leaders	16 (1.7)	8 (1.9)	3 (0.8)	27	(1.5)
Theatre	9 (0.9)	2 (0.5)		11	(0.6)
Other	70 (7.3)	12 (2.8)	8 (2.0)	98	(5.4)



**Table**  
**Knowledge about transmission and prevention of HIV/AIDS by locality**

	<b>Addis A</b>	<b>Debre B</b>	<b>Hetosa</b>	<i>All</i>
	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>
<b>Transmissibility of HIV/AIDS</b>				
Yes	951 (95.3)	409 (96.5)	371 (93.0)	1725 (95.1)
No	27 (2.7)	5 (1.2)	7 (1.8)	39 (2.2)
Don't know	20 (2.0)	10 (2.4)	21 (5.2)	49 (2.7)
<b>Preventability of HIV/AIDS</b>				
Preventable	864 (87.1)	377 (89.1)	260 (65.8)	1496 (83.0)
Not preventable	98 (9.9)	36 (8.5)	98 (24.8)	232 (12.9)
Don't know	30 (3.0)	10 (2.4)	37 (9.4)	74 (4.1)
<b>Who is more vulnerable to HIV/AIDS</b>				
Youth	194 (21.5)	273 (66.3)	191 (54.0)	1080 (64.9)
Commercial sex workers	279 (30.9)	192 (46.6)	176 (49.7)	646 (38.8)
Drivers	105 (11.6)	58 (14.1)	72 (20.33)	224 (13.5)
Promiscuous people	60 (6.7)	56 (13.6)	71 (20.1)	187 (11.2)
Anyone	101 (11.2)	44 (10.7)	43 (12.14)	186 (11.2)
Students	117 (13.0)	32 (7.8)	27 (7.6)	174 (10.5)
Unmarried people	49 (5.4)	45 (10.9)	31 (8.8)	125 (7.5)
Street girls	26 (2.9)	10 (2.4)	12 (3.4)	47 (2.8)
Soldiers	22 (2.4)	7 (1.7)	17 (4.5)	45 (2.7)
Other	186 (20.6)	26 (6.3)	29 (8.2)	238 (14.3)
<b>Could people like you be vulnerable to HIV/AIDS?</b>				
Yes	678 (68.3)	258 (61.3)	215 (54.4)	1146 (63.5)
No	235 (23.7)	117 (27.8)	103 (25.9)	455 (25.2)
Don't know	79 (8.0)	46 (10.9)	80 (20.0)	204 (11.3)
<b>Perceived level of vulnerability to HIV/AIDS</b>				
Not vulnerable	557 (56.5)	215 (51.4)	186 (46.6)	936 (52.1)
Moderate vulnerability	192 (19.5)	63 (15.1)	59 (14.8)	314 (17.5)
High vulnerability	70 (7.1)	38 (9.1)	33 (8.3)	141 (7.9)
Don't know	145 (14.7)	101 (24.2)	137 (34.3)	381 (21.2)
Other	21 (2.1)	1 (0.2)	2 (0.5)	24 (1.3)

**Table**  
**Socio-economic factors associated with risk of/ vulnerability to HIV/AIDS**

	<b>Addis A</b> <b># (%)</b>	<b>Debre B</b> <b># (%)</b>	<b>Hetosa</b> <b># (%)</b>	<i>All</i> <b>(N = 1819)</b>
Prostitution	<b>(N = 996)</b> 958 (96.4)	<b>(N = 424)</b> 413 (97.4)	<b>(N = 399)</b> 381 (95.5)	1748 (96.5)
Forceful sexual assault (rape)	922 (92.6)	392 (92.5)	358 (89.7)	1667 (91.9)
Expansion of bars and local drink sellers	905 (91.0)	381 (89.9)	342 (85.7)	1624 (89.6)
Harmful traditional practices	876 (88.0)	386 (91.0)	309 (77.4)	1567 (86.4)
Homelessness, streetism	831 (83.4)	343 (80.9)	324 (81.2)	1493 (82.3)
Expansion of video houses and night clubs	863 (86.6)	319 (75.2)	229 (57.4)	1407 (77.6)
Expansion of drug use	854 (85.7)	317 (74.8)	214 (53.6)	1380 (76.1)
Lack of health information	745 (74.8)	288 (67.9)	266 (66.7)	1296 (71.5)
Lack of proper recreation places for the youth	731 (73.4)	286 (67.5)	209 (52.4)	1223 (67.5)
Lack of proper child raising	658 (66.1)	242 (0.1)	192 (48.1)	1092 (60.2)
Lack of higher education opportunities	598 (60.0)	214 (50.5)	229 (57.4)	1039 (57.3)
Unemployment	464 (46.6)	254 (59.9)	227 (56.9)	944 (52.1)
Travel away from home, due to job	513 (51.5)	179 (42.2)	220 (55.1)	910 (50.2)
Poverty, hunger	305 (30.6)	162 (38.2)	118 (29.6)	579 (32.0)

**Table**  
**Comparative assessment of vulnerability to/ risk of HIV/AIDS among**  
**different community groups, by locality.**

	<b>Addis A</b>	<b>Debre B</b>	<b>Hetosa</b>	<b>All</b>
	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>	<b># (%)</b>
<b>Marital status</b>				
Married	95 (9.6)	43 (10.2)	49 (12.3)	187 (10.4)
Unmarried	721 (72.9)	334 (79.3)	299 (75.1)	1350 (74.9)
Both	142 (14.4)	33 (7.8)	37 (9.3)	212 (11.8)
Don't know	31 (3.1)	11 (2.6)	13 (3.3)	53 (2.9)
<b>Employment status</b>				
Employed	182 (18.4)	64 (15.2)	55 (13.9)	301 (16.7)
Unemployed	466 (47.2)	237 (56.3)	271 (68.3)	972 (54.0)
Both	261 (26.4)	86 (20.4)	56 (14.1)	400 (22.2)
Don't know	76 (7.7)	34 (8.1)	15 (3.8)	127 (7.1)
<b>Economic status</b>				
Rich	285 (28.9)	106 (25.3)	134 (33.6)	524 (29.1)
Poor	249 (25.3)	110 (26.3)	104 (26.1)	462 (25.7)
Both	363 (36.8)	154 (36.8)	134 (33.6)	648 (36.0)
Don't know	89 (9.0)	49 (11.7)	27 (6.8)	164 (9.1)
<b>Religion</b>				
Christians	253 (25.8)	120 (28.6)	127 (32.1)	499 (27.9)
Muslims	92 (9.4)	36 (8.6)	24 (6.1)	151 (8.4)
Both	401 (41.0)	154 (36.6)	180 (45.5)	732 (40.9)
Don't know	233 (23.8)	109 (26.0)	65 (16.4)	406 (22.7)
<b>Residence</b>				
Urban residents	638 (64.9)	203 (48.3)	286 (71.7)	1126 (62.7)
Rural residents	148 (15.1)	101 (24.0)	31 (7.8)	279 (15.5)
Both	161 (16.4)	97 (23.1)	74 (18.5)	330 (18.4)
Don't know	36 (3.7)	19 (4.5)	8 (2.0)	61 (3.4)

.... continued

**Table**  
**Comparative assessment of vulnerability to/ risk of HIV/AIDS among**  
**different community groups, by locality.**

	<b>Addis A</b> <b># (%)</b>	<b>Debre B</b> <b># (%)</b>	<b>Hetosa</b> <b># (%)</b>	<b>All</b> <b># (%)</b>
<b>Sex</b>				
Housewives	82 (8.4)	30 (7.2)	32 (8.1)	143 (8.0)
Husbands	538 (54.8)	200 (47.8)	196 (49.6)	933 (52.2)
Both	258 (26.3)	127 (30.4)	128 (32.4)	511 (28.6)
Don't know	103 (10.5)	61 (14.6)	39 (9.9)	201 (11.2)
<b>Sex</b>				
Adult males	320 (32.7)	120 (28.6)	123 (31.5)	563 (31.6)
Adult females	119 (12.1)	23 (5.5)	43 (11.0)	182 (10.2)
Both	401 (40.9)	201 (48.0)	123 (31.5)	723 (40.5)
Don't know	140 (14.3)	75 (17.9)	102 (26.1)	316 (17.7)
<b>Sex</b>				
Young males (boys)	191 (19.7)	60 (14.5)	136 (34.6)	387 (21.9)
Young females (girls)	138 (14.3)	5 (1.2)	55 (14.0)	250 (14.1)
Both	587 (60.6)	277 (67.1)	170 (43.3)	1030 (58.3)
Don't know	52 (5.3)	19 (4.6)	32 (8.1)	101 (5.7)
<b>School attendance</b>				
School youth	279 (28.4)	60 (14.3)	56 (14.1)	393 (21.9)
Out-of-school youth	329 (33.5)	220 (52.4)	244 (61.6)	792 (44.2)
Both	312 (31.7)	103 (24.5)	76 (19.2)	488 (27.2)
Don't know	63 (6.4)	37 (8.8)	20 (5.1)	120 (6.7)
<b>Living arrangement</b>				
Youth living with parents	63 (6.4)	19 (4.5)	13 (3.3)	94 (5.2)
Youth not living with their parents	601 (61.3)	335 (79.8)	315 (79.1)	1250 (69.8)
Both	263 (26.8)	58 (13.8)	57 (14.3)	376 (21.0)
Don't know	53 (5.4)	8 (1.9)	13 (3.3)	72 (4.0)

## ANNEX II Summary Tables

**Table**  
**Socio-demographic characteristics of the study population**

	Number	Percent
<b>Residence (locality)</b>		
Addis Ababa	1020	53.3
Debre-berhan	441	23.1
Arsi Hetosa	452	23.6
<b>Sex</b>		
Male	873	45.6
Female	1040	54.4
<b>Age of respondent</b>		
15 – 19	544	28.4
20 – 24	451	23.6
25 – 29	316	16.5
30 – 34	194	10.1
35 – 39	162	8.5
40 – 44	127	6.6
45 – 49	119	6.2
<b>Relation to household</b>		
Head	369	19.3
Wife	420	22.0
Daughter	406	21.2
Son	428	22.4
Relative	127	6.6
Housemaid	67	3.5
Other	96	5.0
<b>Marital status</b>		
Never married	1052	55.0
Married	723	37.8
Widowed	38	2.0
Divorced	73	3.8
Separated	23	1.2
Other	4	0.2
<b>Age at marriage (if ever married)</b>		
< 12	28	3.4
12 – 14	91	11.0
15 – 19	326	39.5
20 – 24	224	27.1
25 – 29	112	13.6
>= 30	45	5.4

**Table**  
**Socio-demographic characteristics of the study population**

	Number	Percent
<b>Religion</b>		
Orthodox Christian	1537	80.4
Muslim	260	13.6
Protestant	97	5.1
Catholic	7	0.4
Other	11	0.6
<b>Ethnicity</b>		
Amhara	1021	53.5
Oromo	543	28.4
Guraghe	209	10.9
Tigre	64	3.4
Other	73	3.8
<b>Educational status</b>		
Unable to read and write	207	10.8
Able to read and write (no formal education)	113	5.9
Elementary education	407	21.3
High-school	1043	54.6
Other	142	7.4
<b>Occupation</b>		
Student	397	20.8
Jobless	365	19.1
Housewife	342	17.9
Peasant (farmer)	224	11.7
Trader (merchant)	138	7.2
Government employee	136	7.1
Daily laborer	45	2.4
Local drink seller	31	1.6
Driver or assistant (long distance, truck)	13	0.7
Construction worker	10	0.5
Driver or assistant (in town)	7	0.4
Other	202	10.6

**Table**  
**Information on HIV/AIDS**

	<b>Number</b>	<b>Percent</b>
<b>Ever heard about AIDS</b>		
Yes	1819	95.1
Never	94	4.9
<b>Usual source of information on HIV/AIDS</b>		
Radio	1569	86.5
Television	652	36.0
Newspaper or magazine	316	17.4
School	270	14.9
Friends	222	12.2
Health institutions/ workers	158	8.7
Neighbors	137	7.6
Leaflets or posters	92	5.0
Anti-AIDS clubs	47	2.6
Family members	35	1.9
Religious institutions/ leaders	27	1.5
Theatre	11	0.6
Other	98	5.4
<b>Availability of radio, TV or VCR at home</b>		
Radio only available	1052	58.2
TV and radio available	311	17.2
All available	177	9.8
TV and VCR available	21	1.2
TV only available	16	0.9
None of the three available	232	12.8

**Table**  
**Knowledge about transmission and prevention of HIV/AIDS**

	Number	Percent
<b>Transmissibility of HIV/AIDS</b>		
Yes	1725	95.1
No	39	2.2
Don't know	49	2.7
<b>Means of transmission of HIV/AIDS</b>		
Sharing blades/ needles with infected person	1130	66.0
Promiscuity or sex with CSWs	626	36.5
Premarital sex	486	28.4
Extramarital sex	462	30.0
Sex with person with AIDS virus	450	26.3
Receiving infected blood	317	18.5
From infected pregnant mother to fetus	122	7.1
Through infected mosquitoes	29	1.7
Sharing clothes with AIDS patient	28	1.6
Shaking hands with an AIDS patient	25	1.5
Eating with AIDS patient	19	1.1
Sharing drinking utensils with patient	18	1.0
Living with an AIDS patient	15	0.8
Other	197	11.5
<b>Preventability of HIV/AIDS</b>		
Preventable	1496	83.0
Not preventable	232	12.9
Don't know	74	4.1
<b>Means of prevention of HIV/AIDS</b>		
One-to-one relationship	1132	75.8
Using condoms	648	43.4
Avoiding local injection with unclean instruments	351	23.5
Abstinence	275	18.4
No sex with commercial sex workers	176	11.8
Avoiding blood transfusion	45	3.0
Other	145	9.7



**Table**  
**Knowledge and attitude about HIV/AIDS**

	<b>Number</b>	<b>Percent</b>
Perceived magnitude of the HIV/AIDS problem in the locality		
Very high magnitude	1421	78.2
High magnitude	232	12.8
Not a serious concern	36	2.0
Don't know	129	7.1
<b>Knowledge of a person with HIV or AIDS</b>		
Yes	273	15.0
No	875	48.2
Don't know	666	36.7
<b>It is possible to identify a person infected with HIV virus just by looking (appearance)</b>		
True	324	17.9
False	1275	70.5
Don't know	209	11.6
Willingness to care for a family member with HIV/AIDS		
Willing	1607	89.4
Not willing	156	8.7
Don't know	34	1.9
<b>Opinion on retention of job by PLWHAs</b>		
Should retain their jobs	1291	72.0
Should stop working (get fired)	398	22.2
Don't know	74	4.1
Other	31	1.7

**Table**  
**Perceived magnitude of premarital and extramarital sexual encounter**

	<b>Number</b>	<b>Percent</b>
<b>Premarital sexual encounter among young boys</b>		
High	1252	70.3
Low	221	12.4
Moderate	124	7.0
None	44	2.5
Don't know	140	7.9
<b>Premarital sexual encounter among young girls</b>		
High	1048	58.9
Low	378	21.2
Moderate	139	7.8
None	60	3.4
Don't know	155	8.7
<b>Extramarital sexual encounter among married men</b>		
High	714	42.2
Low	567	32.3
Moderate	196	11.2
None	56	3.2
Don't know	197	11.2
<b>Extramarital sexual encounter in married women</b>		
High	501	28.5
Low	704	40.0
Moderate	172	9.8
None	115	6.5
Don't know	268	15.2
<b>Problem of rape (sex against will/ consent)</b>		
Common	1179	65.5
Uncommon	528	29.3
Don't know	92	5.1
<b>Contribution of rape to spread of HIV/AIDS</b>		
Yes	1658	91.8
No	58	3.2
Don't know	91	5.0

**Table**  
**Vulnerability to HIV/AIDS:** Rating of population groups by perceived vulnerability level

	Number	Percent
<b>Who is more vulnerable to HIV/AIDS</b>		
Youth	1080	64.9
Commercial sex workers	646	38.8
Drivers	224	13.5
People having unprotected sex	187	11.2
Anyone	186	11.2
Students	174	10.5
Unmarried people	125	7.5
Street girls	47	2.8
Soldiers	45	2.7
Other	238	14.3
<b>Could people like you be vulnerable to HIV/AIDS?</b>		
Yes	1146	63.5
No	455	25.2
Don't know	204	11.3
<b>Reasons for being vulnerable to HIV/AIDS</b>		
Young age, lack of one-to-one relationship	615	55.3
Lack of awareness, lack of protection/ care	254	22.8
Because of alcoholic drinks and drugs	110	9.9
Unclean injections and medical instruments, and harmful traditional surgical practices	107	9.6
Because of sex without consent/will (rape)	45	4.0
Unemployment and poverty	43	3.9
Lack of respect to God, due to sin	3	0.2
Other reason	73	6.6
<b>Reasons for not being vulnerable to HIV/AIDS</b>		
Premarital screening, and faithful relationship	187	43.1
Adequate awareness and self protection	154	35.5
No sexual encounter (abstinence)	61	14.1
No alcohol or drugs, no temptation to sex	13	3.0
Faith in God, protection by God	7	1.6
Use of condom	5	1.2
Other reason	52	12.0

**Table**  
**Personal vulnerability and perception of risk to HIV/AIDS**

	Number	Percent
<b>Perceived level of vulnerability to HIV/AIDS</b>		
Not vulnerable	936	52.1
Moderate vulnerability	314	17.5
High vulnerability	141	7.9
Don't know	381	21.2
Other	24	1.3
<b>Reason for perceived low or no vulnerability</b>		
Limited to one-to-one relationship	374	37.8
No local injections	174	19.0
Marriage	147	16.0
Never had sex	107	11.7
Stopped sexual encounter	97	10.6
Started to use condoms	83	9.0
No sex with commercial sex workers	53	5.8
Other	116	12.6
<b>Reason for perceived moderate or high vulnerability</b>		
Multiple routes of transmission, lack of certainty, lack of protection	148	44.3
Not limited to one-to-one relationship	62	18.6
Young age, temptation to sex	25	7.5
No trust in my husband/ sex partner	25	7.5
Exchange of sex for money	7	2.1
Unemployment, poverty and loss of hope	6	1.8
Other reasons	61	18.3
<b>Willingness to a free HIV-screening test</b>		
Willing to test	1584	88.6
Not willing	167	9.3
Don't know	37	2.1
<b>Reason for willingness</b>		
<b>Reason for non willingness</b>		

**Table**  
**Socio-economic factors associated with risk of/ vulnerability to HIV/AIDS**

	<b>Number</b>	<b>Percent</b>
Prostitution	1748	96.5
Forceful sexual assault (rape)	1667	91.9
Expansion of bars and local drink sellers	1624	89.6
Harmful traditional practices	1567	86.4
Homelessness, streetism	1493	82.3
Expansion of video houses and night clubs	1407	77.6
Expansion of drug use	1380	76.1
Lack of health information	1296	71.5
Lack of proper recreation places for the youth	1223	67.5
Lack of proper child raising	1092	60.2
Lack of higher education opportunities	1039	57.3
Unemployment	944	52.1
Travel away from home, due to job	910	50.2
Poverty, hunger	579	32.0

**Table**  
**Comparative assessment of vulnerability to/ risk of HIV/AIDS among**  
**different community groups**

	Number	Percent
<b>Marital status</b>		
Married	187	10.4
Unmarried	1350	74.9
Both	212	11.8
Don't know	53	2.9
<b>Employment status</b>		
Employed	301	16.7
Unemployed	972	54.0
Both	400	22.2
Don't know	127	7.1
<b>Economic status</b>		
Rich	524	29.1
Poor	462	25.7
Both	648	36.0
Don't know	164	9.1
<b>Religion</b>		
Christians	499	27.9
Muslims	151	8.4
Both	732	40.9
Don't know	406	22.7
<b>Residence</b>		
Urban residents	1126	62.7
Rural residents	279	15.5
Both	330	18.4
Don't know	61	3.4

**Table**  
**Comparative assessment of vulnerability to/ risk of HIV/AIDS among**  
**different community groups**

<b>Sex</b>		
Housewives	143	8.0
Husbands	933	52.2
Both	511	28.6
Don't know	201	11.2
<b>Sex</b>		
Adult males	563	31.6
Adult females	182	10.2
Both	723	40.5
Don't know	316	17.7
<b>Sex</b>		
Young males (boys)	387	21.9
Young females (girls)	250	14.1
Both	1030	58.3
Don't know	101	5.7
<b>School attendance</b>		
School youth	393	21.9
Out-of-school youth	792	44.2
Both	488	27.2
Don't know	120	6.7
<b>Living arrangement</b>		
Youth living with their parents	94	5.2
Youth not living with their parents	1250	69.8
Both	376	21.0
Don't know	72	4.0

**Table**  
**Self efficacy in protection against HIV/AIDS**

	Number	Percent
Any behavioural changes made for protection against HIV/AIDS		
Yes	1077	60.4
No	502	28.2
Other (already careful)	204	11.4
<b>Any changes in sexual behavior, if any</b>		
Limited to one-to-one relationship	438	42.0
No local injections	190	18.2
Started to use condoms	182	17.4
Stopped sexual encounter	158	15.1
Got married	133	12.7
No sex with commercial sex workers	93	8.9
Other	236	22.6
<b>Onset of behavioral changes related to sex</b>		
During past one year	177	20.1
Long time ago (longer than a year)	702	79.9
Any changes in social life (style) made for protection against HIV/AIDS		
Yes	695	40.6
No changes	832	48.6
Don't know	186	10.9
<b>Type of changes in social life (style), if any</b>		
Protection from harmful (bad) habits		
Improving awareness on HIV/AIDS		
Avoid alcohol and drugs, and bad friends		
One-to-one relationship, faithful		
Started discussing about HIV/AIDS with family		
Religious attitude		
<b>Perceived ability to protect oneself from HIV/AIDS</b>		
Able to protect self	1451	80.5
Unable to protect self	95	5.3
Don't know	58	3.2
God knows	191	10.6
Other	8	0.4