ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

# ASSESSMENT OF RISKY SEXUAL BEHAVIOR FOR HIV INFECTION WITH SPECIAL FOCUS ON NIGHT MARKETS AND MOBILE PEOPLE IN GUMMER WOREDA, GURAGE ZONE

BY

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ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES

# Assessment of risky sexual behavior for HIV infection with special focus on night market and mobile people in Gummer Woreda, Gurage zone

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## LIST OF ABBREVATIONS

| | |
|---|---|
| AIDS | Acquired Immunodeficiency Syndrome. |
| AZT | Azidothymidine /Zidovudine |
| BCC | Behavioral Change Communication |
| CBO | Community based organization |
| BSS | Behavioral Surveillance Survey |
| CHA | Community Health Agent |
| CSA | Central Statistics Authority |
| CSW | Commercial Sex Workers |
| CDC | Centre for Disease Control |
| CI | Confidence Interval |
| DCH | Department of Community Health |
| DHS | Demographic and Health Survey |
| EC | Ethiopian Calendar |
| EPHA | Ethiopian Public Health Association |
| FGD | Focus Group Discussion |
| HAPCO | HIV/AIDS Prevention and Control Office |
| HIV | Human Immunodeficiency Virus |
| KABP | Knowledge, Attitude, Behavior and Practice |
| IOM | International Organization for Migration |
| MOH | Ministry of Health |

| | |
|---|---|
| OR | Odds Ratio |
| PA | Peasant Association |
| PLWHA | People Living With HIV/AIDS |
| PPS | Probability Proportional to Size |
| RN | Registered Nurse |
| SRS | Simple Random Sampling |
| SNNPR | Southern Nations and Nationalities Peoples Region |
| STD | Sexually Transmitted Disease |
| STI | Sexually Transmitted Infection |
| SPSS | Statistical Package for Social Science |
| TTBA | Trained Traditional Birth Attendant |
| UNAIDS | United Nations Programme on HIV/AIDS |
| VCT | Voluntary Counseling and Testing |
| WHO | World Health Organization |

# ABSTRACT

Acquired Immuno Deficiency Syndrome (AIDS) has become the current major public health problem in the developed and developing countries. The epidemic is one of the greatest challenges ever to Global well-being.

This study was designed and conducted with the aim of assessing risky sexual behavior for HIV infection spreading with special focus on the night markets and mobile people.

A multistage, cross-sectional survey and qualitative study was carried out between November 2003 and January 2004 in Gummer woreda, Gurage zone.

A total of 838 respondents participated in the survey part and in the qualitative four FGDs of different key informants and 14 individual in-depth interviewees were enrolled and participated in this study. The result showed that 43 (19.2%) of males and 5 (1.8%) of females ever had extramarital sex .Females were being protective with [OR= 0.05, 95% CI: 0.01, 0.23]. Among the age group of 15-54years, 36 (18.2%) of 35-54 years and 25 (12.0%) of age 15-34 years had engaged in risky sexual behaviors in relationship to night markets. Regarding marital status, 50(10.0%) of married and 11 (3.3%) of not currently married had engaged in risky sexual in relationship to night markets. Among the married respondents, 26 (10. 8%) of males and one female had their first sexual contact with non-regular partners. Regarding occupation, 17 (6.6%) of farmers and 44 (7.6%) of others occupation (students, wives, traders and jobless) had engaged in risky sexual behaviors in relationship to night markets. Other occupation had 2.5 times more engaged in risky sexual behaviors than farmers with [OR= 2.5, 95%CI: 1.07, 5.90]. Among the respondents only 27 (3.2%) had reported frequently use of condom in the last six months during

premarital and extramarital sex. Almost all, 826 (98.6%) have heard about HIV/AIDS. Eight hundred and twenty six (98.4%) reported that HIV/AIDS is transmitted by unprotected sex.

Most of the FGDs discussants and individual in-depth interviewees said that nowadays night markets have become a source for HIV/AIDS transmission in the area.

Most of the respondents did not think that they were at risk of acquiring HIV infection while they were at risk in relation ship to night markets and mobility. It needs urgent measure interms of HIV prevention and control in the study area.

# 1. Introduction

Acquired Immuno Deficiency Syndrome (AIDS) has become the current major public health problem in the developed and developing countries. AIDS is caused by a human immunodeficiency virus (HIV) that weakness the immune system making the body susceptible to and unable to recover from other diseases (1, 4, and 7). Its epidemic began spreading in the 1980's in North America and has quickly reached all corners of the globe (2). It was first recognized in 1981, in the United States of America in young homosexual men who had Kaposi's sarcoma and serious infection-predominantly pneumocystis carnii pneumonia that were unusual in men in this age group with no underlying disease (3). Two years later the causative agent of AIDS was isolated and in 1987 an international committee decided to name the new retrovirus as" Human Immunodeficiency virus". The two closely related viruses, HIV –1 and HIV-2 have been identified as causing AIDS in different geographic regions. HIV-1 cause most cases of AIDS in the western hemispheres, Europe; Central, South and East Africa; HIV-2 which appears less virulent than HIV-1, it is the principal agent of AIDS in West Africa. In certain areas of West Africa, both organisms are prevalent (4).

Transmission: HIV is transmitted when blood or body fluids of an infected person come into contact with those of an uninfected person. Mode of transmission includes unprotected sexual intercourse through both heterosexual sex and men who have sex with men (MSM), sharing injecting equipment and receiving transfusions of infected blood. Globally, there are regional differences in the main modes of transmission, with MSM being the main mode for adults in more developed countries, whilst in Sub-Saharan African and South East Asia transmission is predominantly through heterosexual transmission (5). The heterosexual contact is the main mode

of transmission which is fuelled by rampant STDs, multiple and commercial sexual interactions and poor access to information service. And mother- to -children transmission is fuelled by the high fertility rate, high proportion of infected women and nearly universal practice of breast-feeding (6).

Increasing mobility has played a key role in spreading HIV around the world (11). This might be due to the current economic and political situations in most African countries result in many men migrating for work and living away from their families for several month of each year. This includes refugees, mineworkers, truck drivers, traders and migrant farm workers are all leave their homes for long periods of time. During mobility, rates of sexual partner exchange increase tremendously. Transient men may have sex with commercial sex workers (CSW) or with multiple high-risk sexual partners and might bring STDs including HIV to their wives or regular sexual partners. The various risk factors that related to sexual behavior in this case which was the most important determinant of the spread of HIV-1 was the proportion of men engaging in sexual relationships with people other than their spouses (9). Male migrants may engage in high –risk behavior with sex worker, there by increasing their own and their partner's vulnerability to HIV – 1 and other STIs. Cross border trade is another factor leading to HIV /STD infection when businessmen and women travel between countries and within countries selling or buying merchandise. By so doing they indulge (gratify) in sexual relations there by causing a major risk group (10). For many decades, rural migrants have typically been young men aged 15-30 years especially in Africa. Women are now increasingly migrating to cities. These women frequently end up in low-status, low –wage production and service job and may be forced into exchanging sex for money or gifts as a survival strategy.

In sub-Saharan Africa main risk factors for high HIV transmission are: population movement including the military; a goods transport , trade routes , development ; broad sexual mixing partners and multiple partner including CSW, high level of unprotected sex and reproductive tracts infection; relatively low condom use; poverty and unequal distribution of wealth ; gender in equity and inequality, various cultural factors .For example, low rate of male circumcision, and lack of social cohesion in some areas. These factors enable identification of high-risk environments and hence population groups likely to be at high- risk, and also suggest issues that need to be tackled to reduce risk environments and make them safer (12).

In addition, there are some predisposing factors like alcohol selling, infertility and rape. Alcohol has several adverse effects. First, it is a pull factors for customers of both men and women, who encourage to a drinking places for the drinking alcohol. After drinking, impairs judgment and loss of control among individuals and sexual relationships may result. Secondly, these drinking places are breeding points for multiple sexual partner relationships and even commercial sex worker has been closely associated with the development of the alcohol trade. Thirdly, it is relatively common pattern of HIV positive young men drinking alcohol and then sexually seducing young girls (10). In some areas alcohol drinking is closely related to the highly mobile male population that social norms affecting the use of substance that lower sexual inhibition, and contact with commercial sex workers. In rural areas, problems with alcohol abuse reside mostly with men. Women are less likely use alcohol than men, but due to gender inequality may be unable to practice safe sex (9). Drinking in some area is especially noticeable at weddings, night parties and at last funeral rites, where people live in overcrowded small house has been

frequently happened. Sex with a stranger in such ceremonies while drank alcohol was one of the more commonly described rural occasions associated with transmission of HIV / AIDS /STDs (14). In such areas alcohol consumption has been shown to decrease inhibition and is associated with increased STIs, probably due to none or incorrect use of condom. It also increases the amount of vaginal or anal abrasion that occurs in unprotected sex with insufficient lubrications such as abrasions are open portals for the transmission of HIV (11). In this situation, once HIV enters the population, it is likely to spread fairly fast and reach higher prevalence levels (12). The results of study conducted into rural areas of Zimbabwe suggested that male alcohol consumption obstructed effective female behavioral change regarding HIV prevention methods. Women may have negligible negotiation power within the context of sex. Economic dependence on men further limits women's sexual negotiation power and makes difficult for them to refuse unsafe sex even when they know that their male partners are involved in risky sexual behavior that could predispose them to HIV infection. A study among married African women attending STDs clinic in Lusaka, Zambia showed that female alcohol use before sex was associated with increased rate of STDs (9).

Considering the situation of Ethiopia or other African rural community the work is scanty (7). Again, no attention has been made to trace the night market contribution in risky sexual behavior for HIV infection spreading in the majority of rural population.

By considering the current risky sexual behavior for HIV infection spreading in rural community to assess night market and mobile people in contribution of risk sexual behavior for HIV infection spreading is very relevant.

## Literature Review

The HIV/AIDS epidemic is one of the greatest challenges ever to global well-being (15). According to UNAIDS, AIDS epidemic update December 2002, the AIDS epidemic claimed more than three million lives and an estimated five million people have acquired the HIV and 42 million people globally living with the virus (16). Globally there are 11.8 million young people 15-24 years age living with HIV /AIDS which are 7.3 million young women and 4.5 million young men (17).

Globally, according to UNAIDS updated December 2003 reports, number of PLWHA is estimated 40 million (34-46 million), of these, 37 million (31-43million) adults and 2.5 million (2.1-2.9 million) are children less than 15 years. AIDS death in 2003, were 3 million (2.5- 3.5 million), of these, 2.5 million (2.1–2.9 million) adults and 500,000 (420,000-580,000) were children under 15 years. And the people newly infected with HIV in 2003 were 5 million (4.2-5.8 million), of these, 4.2 million (3.6-4.8 million) were adults and 700,000 (590,000-810,000) children under 15 years .Although no nation has escaped the epidemic infection and the rates is not equally distributed to around the globe. Sub-Saharan Africa is the first worst affected continent with HIV/AIDS and its current adult prevalence is range from 7.5- 8.5 %. Caribbean is the second affected continent with HIV/AIDS and its HIV prevalence 1.9-3.1 %.( 18)

According to UNAIDS, AIDS epidemic update December 2002, Sub-Saharan Africa was worst affected and is now home to 29.4 million people living with HIV/AIDS and approximately 3.5 million new infections occurred in 2002 while the epidemic claimed the lives of an estimated 2.4 million Africans in the past year. Ten million young people (15-24 years) and almost 3 million

children under 15 are living with HIV. The worst of the epidemic has not yet passed. In four Southern African countries, national adult HIV prevalence has risen higher than thought possible, exceeding 30% (38.8%) in Botswana, 33.7% in Zimbabwe, 33.4% in Swaziland and 31% in Lesotho) (16).

According to UNAIDS updated December 2003, Sub-Saharan Africa (SSA) is persisting remains by far the region worst-affected by the HIV/AIDS epidemic. An estimated 25.0 to 28.2 million people in the region were living with HIV/AIDS, 2.2-2.4-million adult and child death due to AIDS, 3.0-3.4 million adults and children newly infected with HIV. Its current adult prevalence is range from 7.5- 8.5 %. HIV prevalence varies considerably across the continent ranging from less than1% in Mauritania to almost 40% in Botswana and Swaziland. HIV prevalence in antenatal sites in Namibia rose to 23% in 2002, while Lesotho's most recent data collected in 2003 show median HIV prevalence among antenatal clinic attendees climbing to 30 % (18). A national antenatal prevalence in parts of the region is around 35%, million of children are being orphaned, and years have been knocked off life expectancy and all sectors are being impacted to varying degrees. AIDS threatens food security, productivity, human resource availability and development and may even jeopardize national and regional security. Yet one of the limitations of the responses to AIDS has been the failure of other to learn effectively and in time from those most impacted (12).

Ethiopia is one of the most seriously affected countries in the world (20). Initially the response to the disease was delayed due to denial and ignorance of the scale of damage the epidemic could cause. Lack of experience and inadequate infrastructure, coupled with socio-cultural and

economic constraints; have also curtailed sufficient progress in prevention and control of the infection afterwards. As a result, the epidemic spread fast within the urban communities' subsequently into the rural population (21). The prevalence in the adult population rose from 3.2% in 1993 to 6.6% by the end of 2001. The average urban prevalence is 13.2% (ranges from 3% to 23%) and rural prevalence is 3.2% (ranges from 1.1% to 4.6%). About 2.2 million people, including 2 million adults and about 200,000 children, are currently living with the virus. A greater tragedy is that 1.2 million children have already been orphaned as a result of the spread of the virus. In general the number of people living with HIV/AIDS is increasing with growing needs of care and social support (22).

The highest prevalence of recent infection is seen in the 15-24 years age group, where as about 91% of the infections occur in the age group of 15-49 years . This age group encompasses the most economically productive segment of the population (20). One of the most significant features of the epidemic is its concentration in the working age population (age 15-49 years) such that those with critical social and economic roles are disproportionately affected (23). The epidemic has negative impact on labor productivity. Work time is lost through frequent absenteeism, and decreased capacity to do normal work as the disease advances. The social consequences of the epidemic are also grave as caregivers and income generating members of the family die leaving behind orphans and other dependents. This event further leads to an aggravation of the problem of poverty and social instability (20). Cognizant of the speed at which the infection is spreading and the current and future devastating consequences of HIV/AIDS, the country has begun taking measures to face the challenges including the

establishment of a national taskforce in 1985, the adoption of a national policy on HIV/AIDS in 1998 (22).

**Risky sexual behavior**

In the context of HIV, risk is defined as the probability that a person may acquire HIV infection. Risk arises from individuals engaging in risk-taking behavior for a variety of reasons. They may, for instance: lack of information on HIV, being unable to negotiate safer sex, think that HIV/AIDS affects different social strata than their own, or may not have access to condoms (24). The individuals, nations, and societies are more or less susceptible to infection and the speed and extent the spread of HIV will be determined by the susceptibility (25). Some studies on HIV risk behavior showed that, despite adequate knowledge about HIV/AIDS, higher proportion of people especially youth continue themselves in high-risk behaviors. The risky behaviors known to place individual at risk for HIV infection is having multiple sexual partners are probably the key concern in much of the sub-Saharan Africa (4).

People tend to focus on more visible and immediate issues such as entrance into the labor market, providing for families, and other daily survival issues (28). In conditions of poverty, the risk of HIV infection assumes low priority among people with daily concerns. Poor people in rural areas move to towns in search of work, leaving their families and entering an environment where sexual risk-taking is more common than in their rural homes. Mobility has a critical factor in the spread of HIV in many regions. Key population groups that are highly mobile and high at risk of HIV transmission are sex worker, mobile employees of large industries, seafarers and traders. Occupational travel is associated with high rates of partner change and unsafe sex.

Travelers thus play a part in bridging epidemic between areas of high and lower HIV prevalence (29, 31).

A study has shown that for many decades mobile people in rural areas have been typically young men of age 15-30 years, especially in Africa. Mobile males may engage in high-risk behavior with sex workers, thereby increasing the risk of infection to themselves and their partners. A study in Tanzania has shown that change in closing hours of bars and local beer shop, traditional dances closed before darkness falls and women only collect water or firewood after dark when men accompany them to create a more supportive environment for behavioral change (30).

Studies in Uganda have shown that transmission of HIV has been by heterosexual intercourse, and has been associated with population movements, especially of traders. Specially, change of residence was strongly associated with increased risk of HIV infection among the rural population and was likely to be the result of more risky sexual behavior among those who move. Larson and colleagues reported that in South Western Ethiopia in 1991, higher risk scores were significantly associated with high knowledge about AIDS and among skilled Labors and those between 25-34 years of age. Another study from central Ethiopia in 1995 shows that the spread of HIV/AIDS into rural communities is occurring as a result of existence of high risk sexual behavior in specific rural sub groups. These are known to be frequently traveling into urban communities in combination with a low background prevalence of high-risk practices among the general male farmer population (49). Mobile people are more vulnerable to HIV/AIDS than are populations that do not move. They are highly exposed to HIV infection since they often stay away from their families for relatively long period and tend to have occasional sexual partners.

They may acquire HIV while on the move, and take the infection back with them when they return home, often without even knowing it since they may have sex with different kinds of people (44).

Sexual intercourse between men and women is responsible for over 70% of all HIV infection worldwide (12). The infection rate is not equally distributed globally. In Latin America Caribbean, Asia, Eastern Europe and former Soviet Union in unprotected homo- sexual and bisexual relations and drug use, then spread in to the general population through unprotected heterosexual relations (8).While the major route of HIV infections in Sub-Saharan Africa is heterosexual intercourse estimated to account for 93% of all adult cases, followed by vertical transmission and blood transfusions (38). In Ethiopia, there are four transmission mechanisms: heterosexual contacts, prenatal transmission, blood transfusion, illegal injection and harmful traditional practices. About 90% of new infections are due to the practice of multiple partner sexual contact (39, 40). According to the reports of AIDS cases submitted to Ministry of Health (MOH) 87% of cases had history of multiple sexual contacts (4, 32, 35). A healthy and growing rural economy is vital for Ethiopia's future development. Although HIV infection is still low in the rural areas it is likely to grow substantially in the near future due to the fact that nearly one quarter of the farmers are known to have sexual relationships outside marriage (36).

In Tanzania, a study has shown that number of sexual partners were higher among the men than women. Fifty three percent of them were having casual sex during the previous year. Only 2% of the men in that study reported having sexual contact with bar girls (CSW) (9). Risk factors associated with HIV infection in heterosexual include number of sexual partners, sex with

prostitutes, being prostitute, and being a sexual partner of an infected person (41). From the various risk factors related to sexual behavior, the most important determinant of the spreading of HIV was the proportion of men engaging in sexual relationships with people other than their spouses (9).

A comprehensive analysis of 304 HIV/AIDS studies in Uganda undertaken for UNAIDS in 1997 concluded that overall there is a decline trend in persons reporting non- regular and for multiple sexual partners (37). However, in Ethiopia recent study conducted in Gambela has shown that the majority of the respondents reported that 79.7% had unprotected sex (casual sex). The individual who engaged in unprotected sex were 24.5% of merchants, 19.1% of students, 18.5% of Farmers and 17.4% of government employees (33).

**Prevention of HIV infection**

To date, no cure for AIDS or vaccine to prevent HIV infection has been found. Hence, modification of personal and community behaviors is considered to be the only potentially effective means of preventing the acquisition and spread of the infection. Probably the best action against the spread of the epidemic at the moment is widespread public education to encourage the adoption of risk reducing behavior. Since individual behavior is responsible for most of the transmission of AIDS, active participation of both infected and uninfected person in changing their behavior is required in order to break the chain of transmission (7-8).

It is thought that the single greatest behavior change in Uganda, where HIV infections have dropped considerably, has not been condom use, but rather the decrease in casual sexual liaisons, which correlates with decline HIV, and STD incidence rates (9). Another a study showed that in Uganda the widening the ranges of prevention options to include condom use as well as avoidance of casual sexual contacts helped the programme to gain wider acceptance (42).

Despite some recent increase, rates of condom use remain very low through out Africa. A study in Tanzania has shown that only 20% of the men and 3% of the women ever used condom, again the use was not reported as regular. However, in Ethiopia a recent study conducted in Gambela showed that, among those who had casual sex in the last one year 39.6% did not use condoms (33).

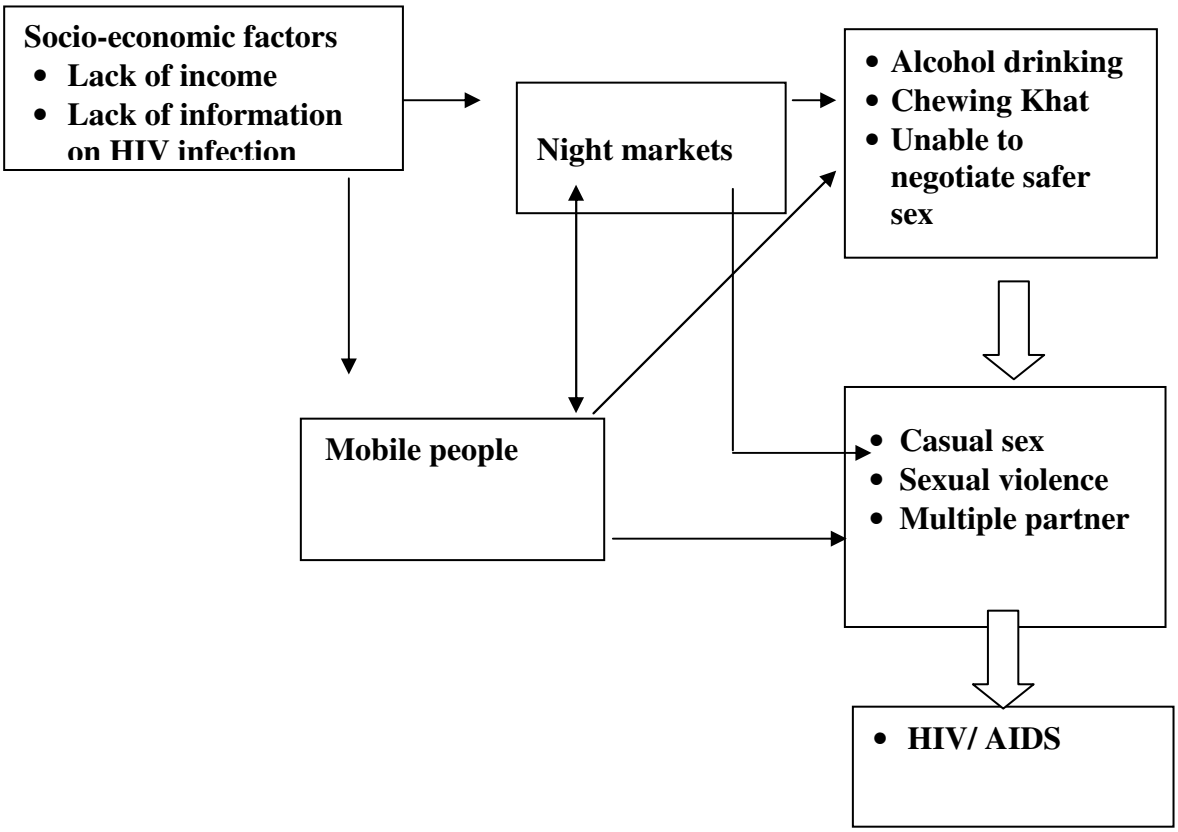
To date no attempt has been made to assess night markets and mobile people in contributing for HIV infection spreading in rural community where most of people live in Ethiopia. As seen from the distribution of HIV in Africa, it's evident that the spread is taking place at a very alarming speed, and the same may also be happening in Ethiopia (7). Hence, it needs to be studies in detail. Therefore, this study will attempt to fill the gap of information about risky sexual behavior for HIV/AIDS spreading in rural community through the night market and mobile people contribution, and to recommend for appropriate concerned body. In the study areas, a day market is usually started around 10:00AM and stopped around 5:30PM. At present the night market in the area is common in different villages. Its holding time is commonly after 4:30 p.m-7:00 p.m. Almost all participants were females except in some weekly night market. These women travel to their home from 7:00pm- 8:00 pm. There is some evidence of causal sex

in relation to night markets in the area. Since, no studies have been carried out to assess this type of risky sexual behavior for HIV infection in rural area. This study will fill this gap and recommended the appropriate measure for the control risk sexual behavior.

**The research questions that this particular study attempts to answer include:**

1. What risk behavioral factors related to HIV infection transmissions are known in Gumer woreda?
2. How widespread is the risk behavior for HIV transmission in the area?
3. Which groups of people are involved in the risk behavior? Is there risky behavior for HIV infection associated with Night market in Gumer Woreda?

**Figure 1. Conceptual framework**



The rural households that cannot meet their food requirements or obtain cash undertake the range of income-generating activities such as participating in night markets for petty trade, selling of firewood and agricultural product to supplement their income. Those who do not have the ability to diversify the source of income are particularly vulnerable to HIV infection transmission. Since, they might exchange sex with money or materials for their survival. These situations might be influenced by prevailing poverty that drives people in to urban where there is risk for unprotected sex. In addition, migration between urban and rural areas facilitates the spread of HIV /AIDS in rural areas. Rural people who migrate to urban areas become infected through alcohol consumption and/or chewing Khat they might visit CSW. Later on rural dwellers returning after time away from home proceed to infect others in rural areas. They in turn spread into the general population. Economic vulnerability increases the chance of exchange of sex for food and money, lack of information how to do safe sex, the predominant culture of silence and passive regarding sexually active women who try to access for health service like STDs. This restricts some people from information, especially adolescent and women and this might lead them to expose for risky sexual behaviors (45, 46).

# 2. OBJECTIVES

## 2.1 General Objective

To assess risky sexual behavior for HIV transmission with special focus on night markets and mobile people in Gummer Woreda, Gurage Zone

## 2.2 Specific objective

1. To assess whether night markets contribute to risky sexual behavior for HIV transmission in Gummer woreda.
2. To assess whether mobile people involve in risky sexual behavior for HIV transmission in Gummer woreda; and
3. To determine the other socio-demographic and economic factors associated with risky sexual behavior for HIV transmission in Gummer woreda.

# 3. METHODS AND MATERIALS

**3.1 Study area:** This study was conducted in Gummer Woreda .The Woreda town is located 220 Kilometers from Addis Ababa in the Southern part of Ethiopia. This district is one of the 12 districts of the densely populated Woredas in Gurage zone. The majority of the population is Gurage ethnicity. The Woreda has 34 rural peasant associations and one capital town, Arekit. The total population of the district was estimated to be 185,888 in 2003/2004. This was an extrapolated figure by the Woreda Health Department and Capacity Building Office from the 1994 population Census. This was taken from Gumer Woreda Health Department health profile of years 2003/2004. Of these, 2,524 (1.4%) live in urban and 183,364 (98.6%) live in rural, of these, 92,200 (49.6%) males and 93,688(50.4%) females. In the woreda there was an estimated total household of 38,727 in years 2003/2004. In the Woreda there were transportation and communication facilities connecting it to neighboring Woreda. In the Woreda there were one health center, three health stations and 18 health posts. However, there was no Center of HIV test in the Woreda. The Woreda was selected for the convenience. There were 9 markets kebeles in the Woreda which were 4 weekly day markets which were served during daytimes and night and 5 night markets which were served only during night. The populations of the areas were frequently mobile for trade and works between urban and rural because of shortage of land farms.

**3.2 Study design:** Descriptive cross-sectional study design was employed. Both quantitative and qualitative research methods were used from November 2003 to January 2004.The survey study was included to describe the distribution of risky sexual behaviors.

**3.3 Source population:** Both sexes of age between 15-54 years, who were dwellers of Gummer Woreda.

**3.4 Study population:** Were individual male and female whose age was between 15-54 years and live in 6 selected kebeles during the study period .These age groups were chosen to see risky sexual behavior within difference age categories including low sexually active age groups.

**3.5 Sample size determination:** The sample size was estimated using sample size determination formula for single population proportion using the following assumptions. Since there were no previous studies which estimate the prevalence of extramarital sex of risky sexual behavior for HIV infection in the area, a prevalence level that estimate maximum sample size (50%) was considered, marginal error (0.05), non response rate of 10% or possible absenteeism and refusal to participate in the study, design effect of two with 95% confidence certainty and alpha (0.05).

Based on these assumptions the total samples size calculated using the formula indicated below gives 845 respondents.

$$n = \frac{(Z\ \alpha/2)^2\ P\ (1-P)}{d^2} = 384$$

$$384 \times 2 = 768$$

$$768 \times 10\% = 77$$

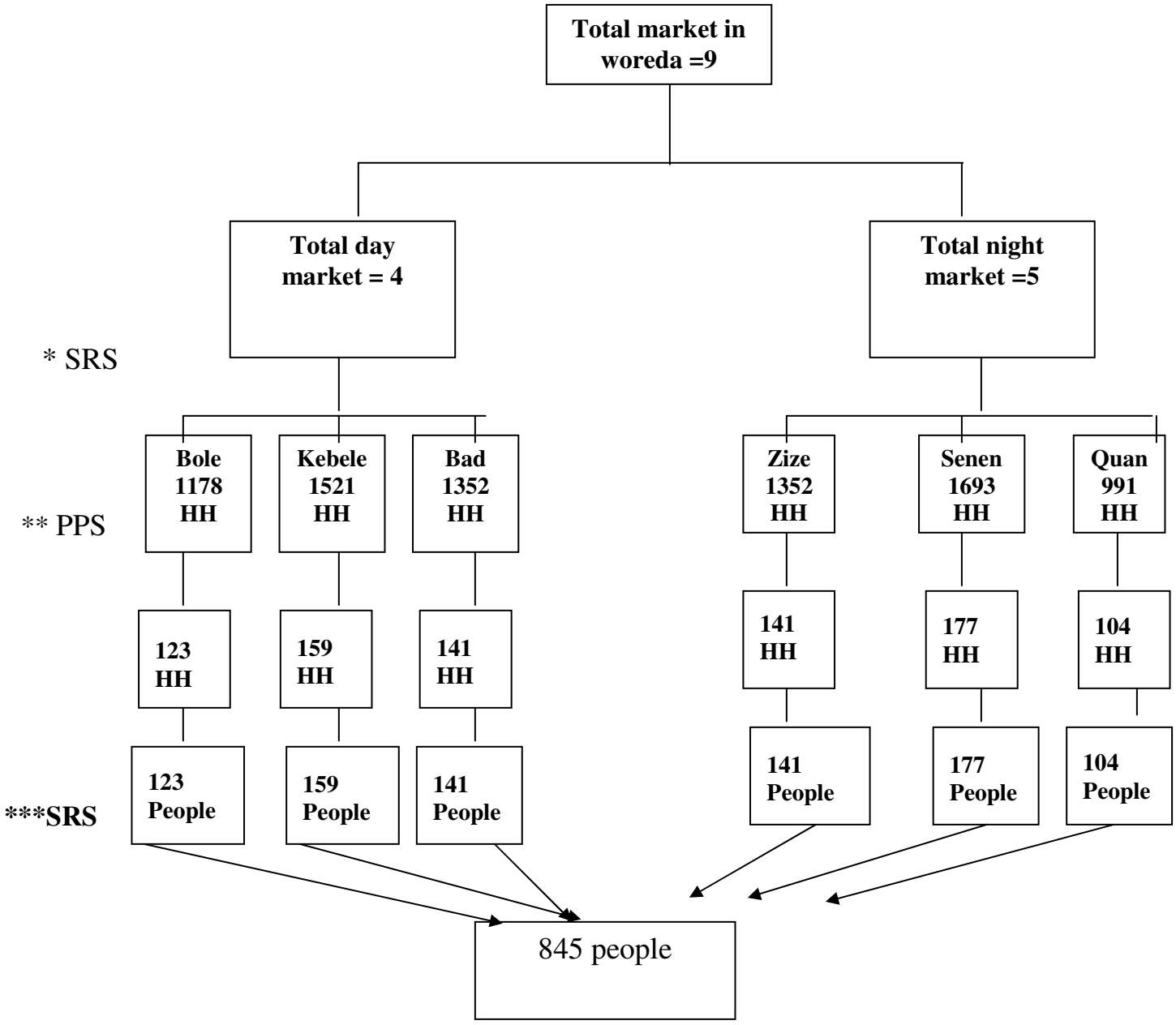
Total sample size = 845

**3.6 Sampling procedure**

The study subjects were selected using multistage sampling technique (See Fig. 2).There were 9 market kebeles in the Woreda. To select 6 from these 9 market kebeles the markets were classified (stratified) into two as day market and night market. This was to ensure the proper

representation of the stratification variable in order to enhance representativeness of other variables related to them. The markets were composed of 4 day markets and 5 night markets. From the four day markets three of them and from five night market kebeles three were selected randomly by lottery methods and enrolled in the study. The reason was selecting 6 kebeles out of 9 market Kebeles were by considering resource. Sampling fraction was allocated using population probability proportional to size of household unit in each kebeles and 845 housing units were identified using systematic sampling technique by dividing the total number of household (HH) by the required number of household (hh). The number 'k' obtained by dividing HH/hh=k was used to identify the interval among each household units. A random number was drawn between one and 'K' to identify the first household unit which was used as a starting point in the process of data collection. Finally, from each household unit one individual was selected for the interview. The selection of male and female were done in a household by using same sex interviewer. Both male and female interviewers go to a household and if the eligible person is male the male interviewer will conduct the interview. If the eligible person is female the female interviewer will conduct the interview. Both interviewers wouldn't conduct the interview at the same time. If there were more than one eligible, one of them was selected by a lottery method. If a selected household had no eligible individuals or refused interview, the next household was taken. Three repeated attempts were made before labeling an individual is un-available for the study in a selected household. For qualitative research method, sampling procedure was done by non-probability sampling or convenience sampling from the source population.

**Fig. 2. Schematic presentation of sampling procedure (Multistage sampling)**




* Simple Random Sampling, *** Systematic Random Sampling, **Population Probability Proportional to sample size HH=Household

### 3.7 Data collection procedure and measurements

Survey questionnaire was developed in English and translated to Amharic. It was organized into five main categories (socio-demographic variables, sexual behavior, knowledge, and attitude variables). Training manual was developed.

### 3.8 Data collectors and supervisors recruiting and training

Four $12^{th}$ grade complete data collectors who speak the local language (two males and two females) were recruited from the area. Two supervisors of BSC level (one Health Officer and one Sanitarian) recruited from Woreda Health Office and Arekit health center. Training was given for 3 consecutive days in the Arekit health center by the principal investigator.

### 3.9 Pre-testing

Pre-testing of the questionnaire was carried out in outside of the actual study area in the woreda. During the pre-testing, the questionnaire was assessed for its consistency, clarity, understandability, completeness, reliability, how much it will answer the objectives and the sensitivity of the subject matter was assessed. Interviews were conducted face to face after obtaining informed consent by going home to home. Interviews were gender matched. It was modified accordingly.

### 3.10 Survey management

The interviewers and the supervisors were trained to keep the highest possible precaution through out the study to record responses honestly and completely. Interviews were conducted face to face after obtaining informed consent by going home to home. The supervisors traveled together with the interviewers to the study sites, supervised the actual interviews and checked for completeness and clarity of the filled questionnaire, then passed to the principal investigator. The principal investigators also checked the data collectors and supervisors in the actual field daily.

### 3.11 Qualitative data collection procedure

Qualitative data were collected between November 2003 and January 2004, before, during and after quantitative data collection. The qualitative study was not a separate but it was a part of the quantitative that aimed to complement the quantitative survey.

The major purpose of qualitative method in this study was:

1. To relate what people said to what they actually practiced
2. To obtain an in depth information

The types of qualitative research methods used in this study were:

1. Observation,
2. Focus Group Discussion (FGDs), and
3. One to one in-depth interview.

Observation involved systematic watching of people and circumstances to find out about risky sexual behavior and interaction in natural environments. The major advantage of observation of

this study was the possibility to relate what people said or reported to what they actually practiced.

### 3.11.1 Open ended Questionnaire Guideline

Checklist was prepared in English. It is translated to Amharic. Four types of FGD were selected with Woreda Health Office, Woreda HIV/AIDS Secretariat Office and by principal investigator. Date, time and place were appointed where the discussion was held. The numbers of each FGD discussants were eight, and their types were 1) peasant association chairmen 2) Woreda women affair, 3) Woreda merchants' representative key-informants and 4) local government sector key-informants.

The discussions were held in Woreda Health Office compound and in Woreda Capacity Building Office. All FGDs were selected from different kebeles in and around the night market kebeles in the Woreda. Sex composition was separated during FGDs.

In all FGDs, the principal investigator facilitated their session. For all FGDs, before the discussion prepared one page paper about the purpose of the study and questions were read by one of the members of FGDs and all the discussants were assured of anonymity. All discussions were started after the discussants agreed to discuss and allowed tape recorder to record their discussion.

### 3.11.2 In-depth interview procedures

Guideline checklist prepared in English and translated to Amharic.

### 3.11.3 Selection of respondents

The respondents were selected by head of Woreda Health Office, Woreda HIV secretarial head office, Community Health Agents (CHA), and by principal investigator from the source population. Before the selection of interviewees, discussions were held with responsible individuals at the Woreda Health Office about the objective of the study.

**3.11.4 Data collection:** For each individual in-depth interviewees briefed about the study by the principal investigator then after obtaining informed consent and place of the interview was arranged between the principal investigator and the interviewee. The questions progressed in conversational manner and were forwarded from general to specific and from easy to difficult. Because the questions were open ended and the respondents were given the opportunity to do most of the talking, the wording and sequence of questions were adjusted to meet the local culture and feels of the respondents.

Almost all interviews were conducted at the date and times settled by the respondents and in places where the respondents felt at ease to talk. The whole interviews were held in private setting by the principal investigator. The interview was conducted in the morning, afternoon and in the night according to their appointment and casual (in the market place). Except one woman who sell tella (local alcohol) all of the interviews were tape - recorded. The interview lasted 30 to 90 minutes.

A total of 14 interviews were conducted, Of these, 2 were from Quante, 1 from Wodaka, 1 from Atazo, 1 from Sabola, 2 from Kebule, 2 from Zizencho, 2 from Arekit town, 2 from Arekitshecko and 1 from BurdanaDumber peasant association. There were a total of 7males and 7 females, their age ranges from 17 years to 41 years.

All of informants were married except one female student and one male trader. Two widowed, one widower, one wife of mobile person, five married farmers, one married government worker, one divorced woman and one home wife who trade local alcohol in the day market. Concerning their educational level except three women and 1 male all were literate. The range of their educational status was from grade 3-12 complete.

**3.11.5 Qualitative data analysis:** Data were categorized and analyzed after the interviews were completed, the translations were done by principal investigator manually in the field by replaying the tape –recorder. The analysis was done solely on descriptive explorative style in order to meet the purpose of qualitative study and to generate further hypothesis of study areas for further research.

### 3.12 Quantitative Data processing and analysis

The EPI INFO Version 6 Software programme and SPSS 11.0 were used to analyze the data collected in the study. The raw data were entered into the computer using the data entry program of EPINFO system by the principal investigator. The data were then cleaned prior to Frequencies, Chi-square, unvariate and bivariate analyses were carried out.

### 3.13 Variables

**Dependent variables**

Multiple sexual partners, alcohol consumption, casual sex, sexual violence, and condom use

**Independent variable**

Socio-demographic variables (sex, age, education, religions, maritalstatus and occupation)

Socio-economic variables (education, night market, mobility, activities in the night market)

### 3.14 Operational definitions

**Risk group:** - These are people with high risk of acquiring and spreading HIV and other STDs among the general populations

**Risk behavior:** - Type of activities were predisposing to HIV/AIDS and other STIs that includes alcohol drinking, sex without condom, involving in CSW, serving in alcohol selling houses bars, mobile people move from place to place and having sex with difference partners, involving in sexual affairs during night markets or on the way of night markets when they return back to their home in the darkness, watching bad film in the town that initiate to unsafe sex.

**Mobile people: -**People who move from place to another places temporarily, seasonally or permanently for different reasons such as trade, market and searching for work.

## Definition of some terms

Kebele: lowest administrative unit under the Woreda (in most cases administrated by peasant association or urban dwellers association.)

Multiple sexual partner: more than one sexual partner

Regular partner: cohabiting (live-in) sexual partner but had never married.

Non-regular partner: sexual partner who did not live together

Risky sex: unprotected sex (i.e. sex with out condom) with partner other than a regular partner or spouse.

Household: a group of persons who live in the same dwelling and eat meals together

Community: a specific group of people usually living in a common geographical area who share a common culture and exhibit some awareness of their identity as a group (Allman etal.1797)

Woreda: Administrative unit under Regional States and Zone.

## 4. Ethical clearance

Ethical clearance was obtained from Addis Ababa University, Faculty of Medicine, and Department of Community Health. The consent was obtained from all study subjects prior to interview and discussion.

# 5. Results

5.1 Socio-demographic characteristics of the study subjects.

A total of 838 resspondents with a response rate of 99.17% were enrolled and participated in the study .Seven participants could not be available for the interview after three attempts.The socio-demographic characteristics of the respondents are presented in table 1. One-thrid of the respondents , 279 (33.3%) were found between the age group of 15-24 years.The mean age was 31.4 ( $\pm$11.04 SD) years, and with median age of 30 years.Four hundred and thrity seven (52.1%) of respondents were males and the rest,401 (47.9%) were females.About half, 431 (51.4%) of the study subjects reported attending formal education and 407 (48.6%) were illiterate.

More than half of the respondents, 579 (69.1%) were followers of the Muslim, 214 (25.5%) were Orthodox Christians, and 45 (5.4%) were Protestant and Catholics.The predominant ethnic group is Gurage 837 (99.9%).The higher proportions of the study subjects were married 503 (60.0%), and of the married women 287 (34.2%) of them were housewife by occupation.Almost all of the respondents,836 (99.8%) were residents of rural areas.

Table 1.Socio-demographic characteristics of respondents in Gumer woreda,November to December 2003. (n=838)

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Sex | | |
| Male | 437 | 52.1 |
| Female | 401 | 47.9 |
| Age in years | | |
| 15-24 | 279 | 33.3 |
| 25-34 | 196 | 23.4 |
| 35-44 | 225 | 26.8 |
| 45-54 | 138 | 16.5 |
| Attendance of school | | |
| Attended school | 431 | 51.4 |
| Never attended school | 407 | 48.6 |
| Educatonal status | | |
| Read and write | 56 | 13.0 |
| Elementary | 176 | 40.8 |
| High school and above | 199 | 46.2 |
| Religion | | |
| Muslim | 579 | 69.1 |
| Christian (Orthodox) | 214 | 25.5 |
| Other Christians | 45 | 5.4 |
| Marital status | | |
| Married couples | 503 | 60.0 |
| Unmarried | 287 | 34.2 |
| Divorced/ separated/ widowed | 48 | 5.7 |
| Polygamous marriage | 42 | 7.6 |
| Occupation | | |
| House wife | 287 | 34.2 |
| Farmer | 259 | 30.9 |
| Student | 178 | 21.2 |
| Farmer and trader | 62 | 7.4 |
| Other trader and jobless | 52 | 6.2 |

### 5.2 Knowledge about HIV AIDS

Among the study population,826 (98.6%) had heard about HIV/AIDS. For those who heard of it, the main source of information was health workers 763 (94.9%) , social gathering 696 (86.8%),freinds/relatives 637 (81.8%), radio 662 (81.5%), religious leaders 480 (60.7%),and 403 (51.9%) have been taught at school (Table2)

Table 2. Source of information about HIV/AIDS reported by respondents in Gumer woreda, November to December 2003.

| Source | Freguency | Percent (%) |
|---|---|---|
| **Source of information :** | | |
| Health workers | 763 | 94.9 |
| Social gathering | 696 | 86.8 |
| Freinds /relatives | 637 | 81.8 |
| Radio | 662 | 81.5 |
| Partner / husband/ wives | 501 | 65.3 |
| Religious leader | 480 | 60.7 |
| School | 403 | 51.9 |
| Leaflet/reading materials | 391 | 50.7 |
| Television | 377 | 50.4 |
| Agricultural extension workers | 287 | 37.4 |

The major ways of HIV/AIDS transmission as reported by respondents were having unprotected sex 810 (98.4%),unsafe injection 811 (98.4%) , sharing blade 803 (98.0%) ,mother to child 723 (89.9%) and circumssion 709 (88.2%) .

Despite the knowledge about HIV/AIDS , 399 (50.6%) said that it is transmitted by eating raw meat , 209 (26.6%) by insect bite and 52 (6.2%) reported that HIV/AIDS is a curable disease .

Among the respondets who mentioned the mother- to- child transmission HIV/AIDS,709 (88.0%) speculated during pregnancy, 607 (76.6%) during delivery, and 683 (84.0%) during breast feeding (Table 3 ) .

**Table 3**. Awarness about mode of HIV/AIDS tranismission reported by respondents in Gumer woreda,November to December 2003.

| Mode of tranismission | Freguency | Percent (%) |
|---|---|---|
| Unprotected sex | 810 | 98.4 |
| Mother to child | 723 | 89.9 |
| Circumcission | 709 | 88.2 |
| Unsafe injection | 811 | 98.4 |
| Sharing of blade | 803 | 98.0 |
| Blood transfusion | 647 | 81.0 |
| Unsafe abortion | 617 | 77.4 |
| Skin piercing | 504 | 63.2 |
| Insect bite | 209 | 26.6 |
| Eating of raw meat | 399 | 50.6 |
| During pregnancy | 709 | 88.0 |
| During delivery | 607 | 76.0 |
| During breast feeding | 683 | 84.0 |

Among the total of 838 study population ,606 (72.3%) said that healthy looking people could transmitte HIV. Among the total of 815 ,those who heard about HIV/AIDS, 678 (83.2%) reported that they discussed about HIV/AIDS with partner/ family members .

Among those who heard about HIV/AIDS ,767 (91.5%) knew about HIV test , and 661 (78.9%) were willing to undergoVCT for future. And those who did not want to have VCT for future , the reported reasons were fear of stigma 66 (50.8%) , faithfullness 49 (37.7%) ,and 15 (11.5%) said that they did not do what others did not do (Table 4)

Table 4. Awareness about HIV carrier state , VCT and STDs reported by respondents in Gumer woreda ,November to december 2003.

| Knew about | Freguency | Percent (%) |
|---|---|---|
| Knew carrier state of HIV | 606 | 72.3 |
| Discussed about HIV/AIDS with partner/families | 678 | 83.2 |
| Knew HIV test | 767 | 91.5 |
| Willing for VCT | 661 | 78.9 |
| **Reason for not having VCT:** | | |
| Fear of stigma | 66 | 50.8 |
| Faithfuleness | 49 | 37.7 |
| "I don't do what others don't do" | 15 | 11.5 |
| **Knew about STDs** | | |
| Gonorrhea | 646 | 79.2 |
| Chancroid | 286 | 38.6 |
| Syphilis | 716 | 86.6 |
| Genital wart | 300 | 41.5 |

### 5.3 HIV/AIDS preventive methods and condom use.

In this study , one hundred and ten (16.5%) believed in changing behavior , 373 (49.8%) being faithfullness (one to one) , 363 (43.3%) abstinence , 41 (6.2%) avoid sharing of sharpe objects like blade and needle , and 29 (4.2%) condom use as means of HIV/AIDS prevention (Table 5 ).

**Table 5**. Percentage of HIV/AIDS preventive methods reported by respondents in Gummer woreda, November to December 2003.

| Prevention method | Freguency | Percent (% ) |
|---|---|---|
| Believed in changing behavior | 110 | 16.5 |
| Abstinence | 363 | 43.3 |
| Faithfulness | 373 | 49.8 |
| Avoid sharing of sharp objects | 41 | 6.2 |
| Believed in condom used | 29 | 4.2 |

Of the total 838 study population , 649 (77.4%) heard about male condom. Among those who heard about condom , most of them knew where it could be obtained,223 (34.3%) in shop ,196 (30.2%) in health institutions ,and 51 (7.8%) in Anti-HIV/AIDS club.However,180 (27.7%) of the respondents did not knew the sources of condom .

In this study population , 27 (3.2%)of respondents had used condom frequently during premarital and extramarital sex in the last six months, and 6 (0.7%) occassionally used it. The reasons for not using condom were 380 (65.3%) said that my partner did not allow condom use , 124 (21.3%) condom were not available , 70 (12.0%) said no experience with condom and/ or did not know condom and no pleasure with condom 8 (1.4%) were reported .

**5.4 Sexual behavior**

In this study the mean age at frist marriage for male was 23.9 ±3.4SD year (with median of 24.0 years ) and for female was 19.1 ±2.5 SD years (with median of 19.0 years). Among those who married their mean age at frist sexual intercourse for male was 23.3 ±3.5 SD years with median age of 23 years and for female was 19.1±2.5 SD of years with median age of 19 years.And their median age at frist sexual intercourse among male is 23 years ,one year lower than their median age at frist marriage ( 24 years) and the median age at frist sexual intercourse among female is 19 years that was similar to their median age at frist marriage 19.0 years.

Among the respondents who mentioned their partner during the frist sexual intercourse , 9 (3.3%) of males and 4 (1.2%) of females had sex with casual partner , 26 (10.8%) of males and one female had sex with non-regular partner ,8 (1.3%) of males and two females had sex with regular partner , while 198 (82.2%) of males and 315 (97.8%) of females had thier frist sexual intercourse with their wives and husbands, respectively .In this study among the respondents reported that 14 (1.7%) had ever exchanged sex with money or matterials in relationship with night markets. With regard to the place where they had the frist sexual intercourse , 30 (5.0%) of respondents reported that in the town out of the woreda ,515 (93.0%) in the village of their actual

residence and 16 (2.1%) did n't remember or know the place of the frist sexual intercourse .When the respondents were asked about their current number of sexual partners ,505 (89.5%) had single partner ,37 (6.6%) had two , 20 (3.5%) did n't have and 2 (0.4%) had three or more sexual partners ( Table 6 ).

**Table 6 .** Number of current sexual partners reported by repspondents in Gumer woreda, November to December 2003. (n=564 ).

| Number of sexual partner | Male n (%) | Female n (%) | Total n (%) |
|---|---|---|---|
| 0 | 1 ( 0.4) | 19 ( 5.9) | 20 ( 3.5) |
| 1 | 212 ( 87.6) | 293 ( 91.0) | 505 ( 89.5) |
| 2 | 28 (11.6) | 9 (2.8) | 37 ( 6.6) |
| $\geq 3$ | 1 ( 0.4) | 1 ( 0.3) | 2 ( 0.4) |

Among the total respondents , 14 (1.7%) had ever exchanged sex with money or materials during the night markets .It was reported that of 87 traders (merchants ) ,9 (10.3%) of males and 7 (8.1%) of females practiced extramarital sex during their mobility with casual (unknown ) and freinds (regular ) partners , respectively.

With regard to the reasons for participating in the night markets,263 (31.6%) were for selling and / or buying different agricultural products like grain (barley) ,false banana products, coffee, ...etc, 60 (7.3%) for trade ,28 (3.4%) for meeting with their friends and drinking alcohol .

A logistic regression analysis was carried out to assess the effect of some explanatory variables, while controlling the effect of possible confounders, over risky sexual practice in relationship of night market and sociodemographic variables. In the regression model, sex, age, education, religion, marital status and occupations were entered as independent variables. All night market contribution of risky sex practiced were entered as dependent. Among the study respondents, 33 (7.6%) of male and 28 (7.0%) of female had experienced risky sexual practice in relationship to the night markets prior to survey.Among the age group of 15-34 years had more engaged in risky sexual compared to the age group of 35-54 years. Females were being protective compared to males.Statistically significance were maintained after adjusting the effect of possible confounders. Regarding education, 29 (6.7%) literate and 32(7.9%) illitrates had engaged in risky sexual practice in relationship of night market. Literate had more engaged in risky sexual compared to illiterate.

Regarding marital status, 50 (10.0%) of married couples and 11(3.3%) of not currently married with [ OR=0.03,95% CI :0.01,0.07 ] had engaged in risky sexual practice in relationship to night markets. Married couples individual had more engaged in risky sexual practice than not currently married individual in relationship with night market. Not currently married is being protective.Among the occupational, 17 (6.6) of farmers and 44 (7.6%) of other occupation ( wives,students and other traders and jopless) had exposed in risky sexual practice in relationship of night market.In this studyother occupation had 2.5 times more likely to be engaged in risky sexual practice than farmers with [OR=2.5, 95% CI: 1.07,5.89]. (Table 7).

Table 7. Socio-demographic characteristics of respondents who engaged in risky sexual practice in relationship with night markets in Gumer woreda ,November to December 2003. (n=838)

| Variable | Risky sexual practice in relation to the night market | | Crude | |
|---|---|---|---|---|
| | Yes ,n =61 | No, n=787 | OR (95% CI) | Adj. OR (95 % CI ) |
| **Sex** | | | | |
| Male | 33 (7. 6) | 404 ( 92 .4) | 1.00 | 1.00 |
| Female | 28 ( 7. 0 ) | 373 ( 93. 0) | 0.92 (0.55,1.55) | **0.22 (0.08,0.59)*** |
| **Age** | | | | |
| 15-34 | 25 (12.0) | 450 (88.0) | 1.00 | 1.00 |
| 35-54 | 36 (18.2) | 337 (81.8) | 0.51 (0.29,0.85) | 0.65 (0.33,1.26) |
| **Education** | | | | |
| Literate | 29 (6.7) | 402 (93.7) | 1.00 | 1.00 |
| Illiterature | 32 (7.9) | 375 (92.1) | 0.85 (0.50,1.42) | 0.87 (0.38,1.96) |
| **Religion** | | | | |
| Muslim | 38 (6.6) | 54 (93.4) | 1.00 | 1.00 |
| Christian | 23 (8.9) | 236 (91.1) | 0.72 (0.42, 1.24) | 0.51 (0.84,2.70) |
| **Mari tal status** | | | | |
| **Married** | **50 (10..00)** | **453 (90.0)** | **1.00** | **1.00** |
| **Notcurrently married**** | **11 (3.3)** | **324 (96.7)** | **0.31 (0.16,0.60)** | **0.03 (0.01,0.07)*** |
| **Occupation** | | | | |
| Farmer | 17 (6.6) | 242 (03.4) | 1.00 | 1.00 |
| Other *** | 44 (7.6) | 535 (92.4) | 1.17 (0.66,2.09) | **2.51 (1.07,5.89)*** |

* Significant

**- not currently married ( single, widowed, divorced and separated )

***-others ( students, wives ,traders and jobless )

Regarding the mobility, 27 (6.2%) of males and one female had ever engaged in risky sexual practice during their mobility for trade prior to this survey . Males had more engaged in risky sexual practice than females.

Regarding education, 25 (5.8%) of literate and 3 (0.7%) of illiterate had exposued to risky sexual behavior during mobility for trade. These showed that literate had more likely to be engaged in risky sexual practice than illiterate during their mobility for trade. Regarding occupation , 13 (5%) of farmers and 15 (2.6%) of other occupation (wives,students and other traders and jopless) had engaged in risky sexual practice during their mobility for trade. Farmers had 2.4 times more likely to be engaged in risky sexual practice than other occupation with statistical significant difference of [OR=2.4, 95 % CI: 1.1, 5.18]. ( See Table 8)

Table 8. Socio-demographic characteristics of trader who engaged in risky sexual behavior in outside of their famiy in Gumer woreda ,November to December *2003.*(n=838)

| Variable | Ever had risky sexual during mobility | | Crude | |
|---|---|---|---|---|
| | Yes, n =28 | No, n =810 | OR (95% CI) | Adj. OR (95 % CI ) |
| **Age** | | | | |
| 15-34 | 14 (6.7) | 461 ( 93.3) | 0.76 ( 0.36, 1.61 ) | 1.20 ( 0.53, 2.50 ) |
| 35-54 | 14 ( 6.7) | 349 ( 93.3 ) | 1.00 | 1.00 |
| **Religion** | | | | |
| Muslim | **14 (2.4)** | **565 (97.6)** | **0.43 (0.20,0.92)** | **0.28 (0.12,0.68)** |
| Christian | **14 (5.4)** | **245 (94.6)** | **1.00** | **1.00** |
| **Marital status** | | | | |
| Married | 16 (3.2) | 487 (96.8) | 1.13 (0.53,2.42) | 1.72 (0.54,5.5) |
| Notcurrently married** | 12 (3.6) | 323 (96.4) | 1.00 | 1.00 |
| **Occupation** | | | | |
| Farmer | 13 (5.0) | 246 (95.0) | 2.0 (0.93,4.24) | **2.38 (1.1,5.18)*** |
| Other *** | 15 (2.6) | 564 (97.4) | 1.00 | 1.00 |

* Significant after adjusting .

**- not currently married ( single, widowed, divorced and separated )
***-others ( students, wives ,traders and jobless )

Regarding ever extramarital sex , 43 (19.2%) of males and 5 (1.8%) of females had ever extramarital sex .Males had more engaged in ever extramarital sex than females .Females had less engaged in extramarital sex than males ,with statistical significant difference of [OR=0.05,95% CI : 0.01,0.23].

Among the age group of the study subjects,33 (10.2%) of age group of 35-54 years and 15(8.3%) of age 15-34 years had engaged in ever extramarital sex . Regarding education, 27 (16.2% ) of literate and 21 (6.3% ) of illiterate had engaged in ever extramarital sex. Literate gad more likely engaged in ever extramarital sex than illiterate .

Regarding occupation, 38 (18.5% ) of farmer and 10 (3.4% ) of other occupations( students, wives ,traders and jobless ) had engaed in ever extramarital sex. Farmers had more engaged in ever extramarital sex than other occupations ( Table 9 ).

Table 9.sociodemographic characteristics of respondents who engaged in extramarital sex in Gumer woreda ,November to December 2003.

| | Ever had extra marital sex practiced | | | |
|---|---|---|---|---|
| Variable | Yes, n=48 | No, n=454 | OR (95% CI) | Adj. OR (95 % CI ) |
| **Sex** | | | | |
| **Male** | **43 ( 19.2)** | **181 ( 80.8)** | **1.00** | **1.00** |
| **Female** | **5 ( 1.8)** | **273 ( 98.2)** | **0.07 ( 0.03,0.20)** | **0.05 ( 0.01,0.23)*** |
| **Age** | | | | |
| 15-34 | 15 ( 8.3) | 165 ( 91.7) | 1.26 ( 0.6,2.38) | 0.93 ( 0.44,1.95) |
| 35-54 | 33 ( 10.2) | 289 ( 89.8) | 1.00 | 1.00 |
| **Education** | | | | |
| Literate | 27 (16.2) | 140 ( 83.8) | 0.35 ( 0.19,0.64) | 1.11 ( 0.53,1.34) |
| Illiterature | 21 (6.3) | 314 ( 93.7) | 1.00 | 1.00 |
| **Religion** | | | | |
| Muslim | 36 (10.1) | 321 ( 89.9) | 0.81 ( 0.41,1.59) | 1.24 ( 0.59,1.63) |
| Christian | 12 (8.3) | 133 ( 91.7) | 1.00 | 1.00 |
| **Occupation** | | | | |
| **Farmer** | 38 (18.5) | 167 ( 81.5) | 0.15 ( 0.07,0.32) | 1.32 (0.44,1.93) |
| **Other ***** | 10 (3.4) | 287 ( 96.6) | 1.00 | 1.00 |

***-others ( students, wives ,traders and jobless )

* Significant

Regarding the influence of alcohol intake on risky sexual practice, 51 (11.7%) of males and 15(3.7%) of females had engaged in risky sexual practice after alcohol intake.

Concerning the other socio-demographic variables , 41(9.5%) of literate and 25 (6.1%) of illiterate had engaged in risky sexual practice after alcohol intake , 40 (6.9%) of Muslim and 26(10.0%) of Christian Mslims had 2.2 times more engaged in risky sexual behavior than Christians influenced by alcohol consumption. Regarding marital status, 47 (9.3% ) of married and 19 (5.7%)of not currently married , 36 36(13.9%) of farmer and 30 ( 5.2%) of other occupation( students, wives ,traders and jobless) had engaged in risky sexual practice influenced by alcohol consuption prior to the Survey (Table 10).

**Table 10.** Socio-demographic characteristics of respondents who engaged in risky sexual behavior influenced by alcohol consumption in Gumer woreda ,November to December *2003*. (n=838)

| Variable | Risky sexual practiced sex influenced by alcohol | | OR (95% CI) | Adj. OR (95 % CI ) |
|---|---|---|---|---|
| | Yes ,n =66 | No, n =772 | | |
| **Sex** | | | | |
| **Male** | **51(11.7)** | **386 ( 88.3)** | **0.29 (0.16,0.53)** | **0.21 (0.1,0.56)*** |
| **Female** | **15 (3.7)** | **386 ( 96.3)** | **1.00** | **1.00** |
| **Age** | | | | |
| 15-34 | 28 (13.4) | 447 (96.6) | 1.86 (1.12,3.10) | 1.93 (0.97,3.86) |
| 35-54 | 38 (21.1) | 325 (79.4) | 1.00 | 1.00 |
| **Education** | | | | |
| Literate | 41 (9.5) | 390 ( 90.5) | 1.6 (0.95,2.69) | 0.69 (0.29,1.64) |
| Illiterate | 25 (6.1) | 382 ( 93.9) | 1.00 | 1.00 |
| **Religion** | | | | |
| Muslim | 40 (6.9) | 539 ( 93.1) | 1.5 (0.9,2.52) | **2.1 (1.12,3.7)*** |
| Christian | 26 (10.0) | 233 ( 90.0) | 1.00 | 1.00 |
| **Marital status** | | | | |
| Married | 47 (9.3) | 456 ( 90.7) | 0.58 (0.34,1.0) | 1.3 (0.64,2.84) |
| Not currently married ** | 19 (5.7) | 316 ( 94.3) | 1.00 | 1.00 |
| **Occupation** | | | | |
| Farmer | 36 (13.9) | 223 ( 86.1) | 0.34 (0.20,0.50) | 1.3 (0.59,2.89) |
| Other *** | 30 (5.2) | 549 ( 94.8) | 1.00 | 1.00 |

* Significant

**- not currently married ( single, widowed, divorced and separated )

***-others ( students, wives ,traders and jobless )

### 5.5Qualitative finding

Observation was done in the night market, around and on the way of night market, including khat selling shops (rooms), tea rooms, local alcohol selling and drinking houses as well as during day markets. Most of the night market participants were females aged between 12 and 60 years, but some males were also involved weekly to sell sheep. The females sold things like false banana products ("Kocho, Bulla"), grain (barley,), cabbage, coffee, "Ingera," cheese, eggs, fertilizers, bamboo products and firewood. Some females stayed in the night markets from 4:30 pm-7:00pm during the night. It was observed that in some night markets the females returned to their homes in the night. The married women who were mainly above 30 years went quickly to their home. But the unmarried females and some young women stayed for along time in the night market. They went to their home walking slowly by chatting (talking) with their friends and each others. Their number on average in one group was from two to five. Almost the entire night market roads were covered with eucalyptus tree and "Enset" - false banana plants along the side of the road. There were also ups and down landscapes in which they were traveled in the night.

Females who came from far places (Kutere and Aftir weekly day market) some of them hold a lamp made from bamboo tree filled with Kerosene and a piece of cloth put on the tip. Those who came from near places went in the darkness in a group of 3-4.

Principal investigator did observation in khat selling shops and tea rooms. Khat is usually sold around the night market places that have observed in the woreda. The numbers of permanent Khat selling shops in those night markets were16. Khat was chewed in groups in different places

around these night markets. The average number of people who were involved in a group of Khat chewing was 2-6. Most of people were young males aged from 18-40 years. The number of people who chew Khat in-group in these areas increased after 1:00pm and decreases after 5 pm. The usual places where khat was chewed in-group were tea rooms and some khat selling shops.

There were a total of 14 local alcohol-selling houses around the night market, which were observed during the study. The people who involved in local alcohol drinking houses were those who aged between 25 and 70 years. The number of people drinking teji and areke increased after 3:00 pm up to 5:30 pm then decreased gradually as the darkness became fall. During the observation in these local alcohol selling houses there was no anyone who spoke with females or sat with females since the females did not drink alcohol except in occasions of holiday which were celebrated once a year. The number of females who sold areke in weekly markets were estimated about 40 in one place, especially in kebule their numbers were above these. The females who involved in weekly market in areke selling were seemingly young and a married woman who's their age was estimated between 20 and 35 years. These situations were risky for sexual behavior for the sellers and drinker. Because they walked in the darkness with females along a distance, where there was suitable road side for risky sexual behavior in rural areas. This is my conjecture or my opinion.

### 5.6 Focus Group Discussion and individual in-depth interview findings

A total of 4 Focus Group Discussions (FGDs) and 14 individual in-depth interviewees (IDIs) were conducted in Gumer Woreda .In this part of the study convenient sampling were used considering inaccessibility and in-depth information could obtained from key-informants .

All the FGDs discussants and individual interviewees have had awareness of HIV/AIDS. Most of the discussants knew the impact of HIV/AIDS and they said that it is a major health and development problem. They considered that HIV/AIDS has been affecting the productive age group of the society.

Almost all of the FGDs and interviewees listed about HIV/AIDS transmission as unprotected sex, sharing of sharp objects (blade and needle contaminated with blood of HIV infected person), and harmful traditional practices, such as circumcision, tonsillectomy and tooth extraction.

Most of the FGDs and some of the interviewees believed in that unprotected sex is the major way of HIV/AIDS transmission in the area.

According to the opinion of most of the FGD participants and most of individual in- depth interviewees nowadays night markets have become a source for HIV/AIDS transmission. FGD participants from farmer associations and governmental local sectors and females' key informants said that, previously in Gurage night markets were seen as a market and there were no premarital and extramarital sex. It was forbidden and considered as a shameful act. However, nowadays some youngsters who travel between urban and rural developed bad habits

in town areas and they reflected that in rural areas in relationship with night markets. They had engaged in risky sexual practice by hugging or frightening females in some areas of night markets. These youngsters drank alcohol around the night markets and accompanying females on the ways back to home in the darkness. This condition initiates sexual desire where there were roadsides covered by false bananas and eucalyptus trees and landscapes with ups and downs.

Among all of the discussants and some interviewees they had common ideas in that, risky sexual behavior has been happening in association with night markets willingly or unwillingly. However, females who were the victims of the events did not report to concerned body because of cultural influence, even if they were raped. Most of the interviewees mentioned that the females usually informed only when they became pregnant or in labor. Otherwise, they did not tell to anyone particularly unmarried, divorced and widowed.

There was much similar evidence, which were mentioned widely during FGD discussion of female key-informants, farmer association chairmen, and almost all of the interviewees. The participants mentioned about the occurrence of casual sex which was greater than sexual violence in association with the night markets. As mentioned, the situation was more common around night markets like, Zizencho, Kebul, Bole and Arekit.

According to some of the interviewees, some men persuaded females by money or materials for sex during night markets. Even, there were evidences regarding this fact from male interviewees. It was stated that men do this to continue the relationship with the woman for the future.

According to the FGD and IDI participants, the reason why people participate in the night market was that most of the society in the area leads their life by selling and buying agricultural products and take to other markets for profit, communicating with people for different social reasons. However, few of males and females of interviewees said that the night market could serve as a good opportunity for the females to discuss with a person who wants them for sex. For example, as one of interviewee of 29 years old woman said, **"If the woman is volunteering, she goes to the place where she had an appointment on the pretext of going to night market."** As they said this is especially common among those females whose husband lives out of the Woreda for work and for those whom there is no one who controls them. Besides, some females who stay in the night market have a disagreement with their husband. The husband doesn't raise his suspicion for risky sexual behavior but indirectly complains by saying that the cattles have not entered home at the right time, our children are suffering and the like. This happens for the women whose husbands live with them in the countryside.

In addition to night markets, which contributed for the spread of HIV infection, there are also day markets in the area which are used as an appointment for communication for some males and females to fix where and when they meet. According to most FGD discussants and individual in-depth interviewees, the possible linkage of the night market and far distance day markets for HIV infection spreading might be inseparable. Because both market users usually travel in the night back to their home from 7:00pm- 9:00pm. Due to this, some of them might have been engaged in risky sexual practice. For instance, a 26 years old woman said, **"Once a girl was**

**returning after selling pots in Kutere, weekly market, she asked her nephew to accompany her. When they were traveling together that boy had made …., and she became pregnant."**

Another way of HIV spreading in the area is related with mobile people and their wives in that they might engage in risky sexual behavior. All of the FGD discussants of females, farmer association chairmen and government local sector key-informants agree that the husbands might be engaged in casual sex or CSW when they were out of their wives. They also said that this was not only the behavior of the mobile people but also it was the behavior of the people in the countryside. Fore example, one of FGD discussant of farmer association of middle age man said, "**Once in our village a husband went to the house of mobile person in front of his house, his wife saw him when he entered. She closed the door from out side and she cried and a lot of people gathered. When the door was opened the person was holding flashlight and the woman holding pillows, standing in the house. Such events are common in the homes of mobile people in the night. In Addis …, bar ladies have the opportunities to use electricity …… but in our …darkness."**

According to most of interviewees of males and females, the wives of mobile people occasionally had casual sex with the friends of her husbands willingly or unwillingly. In addition, some females who have polygamous marriage they easily submit themselves for some one who asked them for sex thinking that "**My husband is enjoying life with his wife in the town why not I enjoy life with another person."** Furthermore, they said that there are some experienced men who had engaged in risky sexual practice. The experienced men say that **"… Sheria"** doesn't interfere in this case and sexual intercourse itself created by Allah. Some of

them do this to get children because they do not have children from their wife. Fore example, a 37 year old man, who had no children said, **"Before three years, three wives of mobile people have had love affair with me. One of these women has met with me when she was returning from the night market and I met with other two of them by going to their home at night and staying there by chewing Khat until their children have slept."** This type of evidence was happened on the pretext of chewing Khat, alcohol drinking and /or preparing rope in the house of mobile people. There were many similar evidences of extramarital sex that were mentioned by almost all FGD discussants and in-depth interviewees' informants. Most of the interviewees of males and females were said that females had sex with exchange of money as well as materials as they did in the ways of night markets.

In addition to the night market and mobile people contribution for risky sexual behavior for HIV infection spreading there is also traditional night wedding and annual dancing during "Arefa" and "Meskel" [traditional holidays] in the area. This was mentioned widely during FGD discussants of farmer association chairmen, females and government local sector key- informants and most of interviewees of male and females. Because there were many factors, which aggravated casual sex like alcohol drinking and/or chewing khat, night wedding and dancing during annual ceremony of students in the Area. For example, one female FGD discussants said, **"Night wedding . . . therefore, I can say sometime later we might not get people of our age because of the HIV."** Some FGD discussants and female key-informants said that last year students who had taken the 10th grade secondary school national examinations were having a ceremony in our village. That time they were dancing throughout the night and most of those

students were in eucalyptus trees with opposite sex in the night. Later on some of the female students became pregnant.

Most of the FGD and IDI had similar ideas that despite the knowledge of HIV/AIDS among the society, still there is poor behavioral change, even though the government has tried to teach about the disease. The communities were not open to talk about the diseases because of fear due to cultural reasons. For example, one man of interviewee said, "**Once a person from HIV/AIDS secretariat office was teaching the people at a funeral processing about HIV/AIDS. While he was teaching one elder person insulted the educator in Guragegna "Ej yeredhesh tohegreid yemir yeqx (t) erhema shelelbeto emochi yegmya ej yawerdish."** meaning it is equivalent to "**let your motive disappear why not we collapse as a leaf with a beautiful girl. He is making the motive of men disappear."**

A few interviewees said that some people say that there is a medicine called AZT for HIV, which increases life of HIV patient. If this is so what is HIV after all, death is inevitable. The pleasure of one day is not simple. For example, one of the male interviewee of middle age said, **"I know HIV is not curable but I don't think I am free from the virus. Because I haven't made any test for HIV. However, I don't like to have the test for HIV, unless the people of my village have test. I fear discrimination and ……."**

There is also misconception about HIV/AIDS transmission among the community. Some of the interviewees said that some people thought that eating together, using latrine together and wearing a cloth of the HIV patient transmits the disease. Few of male in-depth interviewees said

that some members of the society believed in use of condom that it is remained in the female and consequently it lead to surgery. Regarding HIV/AIDS prevention, all FGD of government of local sector key informants , few of female and farmer association chairmen discussants were mentioned correctly about 3 methods of HIV prevention (abstinence, being faithfulness, and condom use) . And few interviewees have had similar knowledge, about the three methods of HIV/AIDS prevention.

# 6. Discussions

In Ethiopia, information on night market contribution for HIV/AIDS spreading in rural community is not assessed. To examine this issue, this study was designed and conducted with the aim of assessing risky sexual behavior with special focus on the night markets and mobile people, in Gummer woreda, Gurage zone.

All of the FGD participants agree that premarital sexual relationship is unacceptable in Gurage culture for both sexes; however, night market and mobility predispose the young people for risky sexual practices. There are also other conditions in addition to night market and mobility that influence sexual contacts, such as traditional holiday or festival dances to celebrate "Arefa", "Meskel", night wedding, and students' annual ceremony night dancing and a place where the local alcohol is drunk create a conducive climate for the spread of HIV AIDS including STDs infections. These social functions are often characterized by permissive sexual activities provoked by alcohol (38). Most of the individual interviewees have had similar opinion with FGDs discussants in that concerning premarital sex as above mentioned. Extramarital sex is generally not acceptable in Gurage culture for both sexes. But most of FGDs participants and individual interviewees mentioned that some men are engaged in extramarital sex with women in the countryside as well as during their mobility for trade or work. They also said that extramarital sex was not only the behavior of the mobile people and their wives but also the behavior of some men and women in the countryside in relationship to night market and mobility.

Extramarital sex contributes to the spread of AIDS epidemic because of multiple partners in predicting level of risk at least among men and the potential danger of infection to a monogamous partner, especially an unsuspecting and, thus, potentially unprotected one (52). For example, in this study 43 (19.2%) of men and 5 (1.8%) of women had reported extramarital sex prior to the survey. It has statistical significance difference with sex [OR=0.05, 95% CI: 0.01, 0.23]. It was found that men had more likely to be engaged in risky sexual practices than women. This could partly be attributed to under reporting by females about their sexual behavior. This percentage of extramarital sex among males is almost similar with studies to other conducted in elsewhere. These results are comparable to that (Meheret et al. (1996) who studied urban population of Ethiopia and found that 18% of males and 5% of females had sex with non-regular sexual partners in the previous year (52). For example, another study in 1992 in Limu district conducted by Shabbir Ismail has shown that 16 (23.5%) of men had had extramarital sex with another farmer's wife(7) , study conducted by Yeyeh Negash et al. in Gambella town in 2000,has shown that 18.5% of farmers practiced sex with non-regular partner(8), in study of Behavioral Surveillance Survey (BSS) of 2000, has shown that 23.2% of intercity bus driver and 20.8% of truck driver had reported extramarital sex (51), in Bulawayo, Zimbabwe 24.7% of men did the same (7) and Dakar, Senegal in 1997 study conducted has shown that 12% of men had sexual partner other than their wives whereas 99% of married women had not had sex with anyone except their husband in the past 12 months (53).

Most of FGD discussant of local sector and females key-informants said that the youngsters who chew khat and/or drink alcohol influenced by this and have had risk sexual practice by force or willingly in the way of different night markets in the Woreda. Most of FGD participants and

individual interviewees mentioned that alcohol is incriminated as one of the factors that can facilitate extramarital sexual relationship. Few of female in-depth interviewees said that sometimes married men who failed to have children from their lawful wife will look for another women but it is not common.

Regarding the age, 28 (13.4%) of age group of 15-34 years and 38 (21.1%) of age 35-54 years had engaged in risky sexual practice. The age group of 15-34years had more engaged in risky sexual practice than age group of 35-54 years. This could be partly due to alcohol selling place in the farmer association around night market place, presence of mobility and unemployment.

Females were engaged in risky sexual behavior influenced by alcohol consumption. This might be due to inability to negotiate sex and economic dependent on males (Table 10) .This finding is not similar with other studies because this study was conducted only in farmer associations' kebeles. In this study, Muslims had 2.1 times more engaged in risky sexual behavior than Christians. This might be due to the difference of sample size that was 69.1% were Muslim and 30.9% were Christian and females might more exposed in risky sexual influenced by alcohol than males, because of unable to negotiate and economic dependent on males (Table 10 )

According to FGD of farmer association chairmen, government local sector and females' key-informant, mobility and participation in night markets were the main factors for HIV spreading in the area. This finding supports the quantitative result that showed that 27 (6.2%) of male and 1 (0.2%) of female had engaged in risky sexual practice during their mobility. This might be traditionally sex is something private which should not be discussed openly specially with

females. This study is relatively similar with other study conducted elsewhere. For example, the Ethiopia DHS 2000 has shown that among the married 7% of men and 1% of women and among the unmarried 5%of men and 1%of women have had sexual intercourse with more than one partner in the last 12 months (1). Thirteen (5.0%) of farmers and 5 (2.6%) of other occupation had engaged in risky sexual practice during their mobility. In this study, farmers had 2.4 times more likely to be engaged in risky sexual practice than other occupations during their mobility for trade with statistical significant different of [OR=2.4, 95% CI: 1.1, 5.18]. This finding is supported by qualitative study in that some of individual interviewees said that the local tella seller females have had four to five sexual partners. The partners of these women were farmers of local villages and they did that with out fear of about HIV /AIDS.

Regarding the night markets contribution for HIV/AIDS, almost all of farmer association chairmen, females, government local sector key informant and most of individual interviewees had similar opinion in that night market nowadays have become a source for HIV/AIDS. They said that because of many evidence of risky sexual behaviors related to night markets in the areas. These evidences strengthen the results of quantitative which showed that 33 (7.6%) of male and 28 (7.0%) of female had risky sexual practice in relationship to night markets. Men had more engaged in risky sexual practices in relationship with night markets than female. Being female is protective. There were statistical significant association [OR=0.22, 95% CI: 0.08, 0.59] with sex after controlling other confounding factors with logistic regression.

Regarding the marital status, 50 (10%) of married and 11 (3.3%) of not currently married had extra marital sex in relationship to night markets. Statistically significant different with sex

[OR=0.03, 95% CI: 0.01, 0.07]. It showed that married couples individual had more likely to be engaged in risky sexual practice than not currently married. This might be partly due to night market, mobility and experience that related with casual sex. This finding has similarity with a study conducted in 2002, by Ermias Mulugeta in Addis Ababa and Nazirateth has shown that reason for visiting Voluntary Counseling and Testing were more than 10% of clients claimed to have two or more casual sexual partner (54).

This situation has increased risk for exposure to causal partner and its serious consequence (4, 46). For example, in other study elsewhere has shown that moving from place to place especially poor women and girls may became at risk of casual sex in the course of their daily tasks than those who are better off, for example, when they walk home on their own from work late at night, or work in the fields or collect firewood alone (50). The way of risky sexual practice in relation to night markets mainly on the way of their home back from the night market. All of the participants and in-depth interviewees had similar opinion that most of unprotected sex occurred in the way of night market in the darkness, again they agreed that most of the females did not reported their rape for concerned body because of fear of cultural influence. These situations hidden underground the risky sexual behavior and fueled HIV/AIDS epidemic in the study area with relationship of widely common night markets, mobile people and night wedding ceremony.

In studies dealing with sensitive issues obtaining honest response is the highest challenge. We have tried to minimize this challenge by training interviewers, maintaining privacy while conducting the interview, gender matching interviewers of each sex was preformed because

women are more free to discuss issues related to sexuality with women and men with men (4) and persuading the respondents to tell the truth by assuring them that the results of the study will be confidential. Additionally, pre-test was done out of the actual survey sites in similar socio-demographic population in the Woreda. During the pretest twenty individuals were interviewed. Some phrases and words were modified and corrected after pre-testing before the actual survey.

The possibility of under-reporting of the risky sexual practice in this study was due to the nature of the subject matter under investigation. In most communities, sensitive issues like AIDS and information on personal matter like sexual practices are normally kept secret in Ethiopian societies. The same is also true with the number of respondents who had engaged in risky sexual practice in relation to night market and/or mobility. However, despite such shortcoming, this study has provided and insight in to the night market and mobile people contribution for risky sexual behavior for HIV infection spreading in rural community.

In this study the finding of qualitative confirms the quantitative survey results of risky sexual practice in relationship to night markets and mobile people. This might be valid risky sexual behavior for HIV infection spreading in relationship of night markets in rural community.

## Strength and limitation of the study

### Strength

There were no similar rural community based studies, which explored the night markets and mobile people contribution for risky sexual practice for HIV infection spreading.

1. Combined study designs were appropriate for validity of results.
2. It can be used as base line information on night market and mobile people contribution for HIV/AIDS infection spreading in rural community.
3. Flexibility in the use of tape recorder, choosing of place of interview as well as length of the interview made and the informants comfortable during the data collection, which greatly helps the informants themselves and express their view on different issues .
4. The sample size procedure and analysis methods utilized were appropriate to the study and considered as one of the strength of the study.

### Limitation

1. Possibility of underreporting of risky sexual behavior due to personal matters of sensitive issues
2. It takes long time in transcription and writing of the qualitative parts of this study.
3. Lack of similar study in the country to compare results.
4. The study was done in one Woreda due to shortage of resources.

## Conclusion

1. The majority of the respondents, participants and in-depth interviewees in this study had sufficient awareness about HIV/AIDS. However, there is no satisfactory behavioral change in the community.
2. Most of the study subjects didn't think that they were at risk of acquiring HIV infection while they were at risk in relation to night market and mobility.
3. There were many risky sexual practices in relationship to night markets and mobility in the village. Therefore, there would be a possibility of rapid spreading of HIV infection among the general population with these night markets, mobile people , night wedding ceremony and annual night dancing of students.

## Recommendation

1. Hence, based on this preliminary finding the following recommendations are given:
2. It needs urgent measures of HIV/AIDS prevention and control in the study areas.
3. To prevent risky sexual practice related to night markets, responsible body should be design a strategy to shift night markets to morning. Especially, Bad night market, Zizencho, Arekit, Kebul, Wodaka night markets…etc
4. Traditional night wedding and students' annual night dancing ceremony need urgent shifting to the day's times by concerned body
5. Strongly discourage premarital and extramarital sex relationship to night market and mobility and encouraging abstinence, faithfulness and condom use.
6. All attempts should be made to prevent HIV/AIDS by increasing behavioral change of the societies.
7. The presence prevalence of unprotected sex should be monitored.
8. . In the Woreda there should be a Voluntary Counseling and Testing for HIV infection

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## Annexes A: Survey questionnaires.

### Addis Ababa University,
### Medical Faculty Department of Community Health:
### Survey questionnaire on Assessment of risk sexual behavior for the spread of HIV/AIDS infection with special emphasis on night markets and mobile people in Gumer Woreda, Gurage Zone.

001. Questionnaire Identification number /__/_____/
002. Kebeles_____Village_____Woreda_____
003. Zone_____
004. Region_____
Introduction
My name is _____. I am working for a thesis research project conducted in Addis Ababa University in collaboration with Ethiopian Public Health Association to find out sexual risk behavior in people, which predispose them to acquire HIV infection. We are interviewing people in Gumer Woreda in order to get people response about HIV/AIDS in the community, confidentiality and consent: I am going to asking you some very personal questions that some people find difficult to answer. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want. However, your honest answers to these questions will help us better understand risk behavior for the spread of HIV infection. We would greatly appreciate your help in responding to this survey. This survey will take about 20-30 minutes to ask the questions. Would you be willing to participate?

(Indicate by ticking the appropriate response)

Yes_____ No_____

Signature of interviewer certifying verbal informed consent_____.

Interviewer visit

| Visit 1 | Visit 2 | *Visit 3* |
|---|---|---|
| Date | | |
| Interviewer | | |
| Result | | |

Result codes: 1. Completed 2. Respondent not available. 3. Refused 4. Partially completed 5.Others.

005. Interviewer code _____/_____ Name_____
006. Date of interview _____/_____/_____/Time_____
007. Checked by supervisor: Signature_____Day _____Month _____Year_____

Part I. Socio-Demographic characteristics of the subjects (circle one answer)

| No. | Questions and Filters | Coding categories | Skip to | *Code* |
|---|---|---|---|---|
| 101 | Record sex of the respondent | 1.Male.....1<br>2. Female....2 | | |
| 102 | How old are you? | ____years | | |
| 103 | Have you ever attended school? | 1.Yes.....1<br>2.No.....2 | <br>2→Q105 | |
| 104 | What is the highest level of education you completed? Circle One answer | 1. Only read & write...1<br>2. Grade 1-6.....2<br>3. Grade 7-10.....3<br>4. Grade 11-12.....4<br>5. Above grade 12.....5<br>6. No response.....9 | | |
| 105 | What religion are you? Circle one | 1. Muslim.....1<br>2. Orthodox Christian..2<br>3. Protestant.....3<br>4. Catholic.....4<br>5. Others.....5 | | |
| 106 | To which ethnic group do you belong? Circle one | 1. Gurage.....1<br>2. Selti.....2<br>3. Amhara.....3<br>4. Oromo.....4<br>5. Other (specify).....5 | | |
| 107 | What is your marital status? | 1.Never married.....1<br>2.Married..... 2<br>3.Divorced.....3<br>4.Separated.....4<br>5.Widowed/ Partner died.....……..... 5 | | |
| 108 | Residence | 1.Rural village.....1<br>2.Urban.....2 | | |
| 109 | What is your occupation? | 1.Farmer.....1<br>2.Merchant.....2<br>3.Both (Farmer & Merchant).....3<br>4..House-wife.....4<br>5..Solider.....5<br>6..Tella seller.....6<br>7..Daily laborer.....7<br>8..Student.....8<br>9.Home servant…….9<br>10.Jobless.....10<br>11.Others(specify).....11... | | |

Part II. Marriage and live in partnerships

| No. | Questions and Filters | Coding categories | Skip to | *Code* |
|---|---|---|---|---|
| 110 | How old were you when first married? | _____ Years<br>1.Don't know .....88<br>2.No response.....99 | | |
| 111 | If married<br>Man: do you have more than one wife?<br>Woman: Does your husband have other wives? | 1.Yes.....1<br>2. No.....2<br>3. Don't know .....88<br>4.No response.....99 | | |

Part III. Sexual behavior

| No. | Questions and Filters | Coding categories | Skip to | *Code* |
|---|---|---|---|---|
| 201 | Have you ever had sexual intercourse? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | 2→Q210<br>99→Q210 | |
| 202 | In Q201 if the answer is yes, at what age did you first have sexual intercourse? | _____ Years<br>1. Don't know.....88<br>2. No response.....99 | | |
| 203 | Where did you have first sexual intercourse? | In_____...place<br>Time: 1. Night.....1<br>2. Day .....2 | | |
| 204 | With whom did you have first time sexual intercourse? | 1.Casual partner.....1<br>2.Regular partner.....2<br>3. Husband/Wife.....3<br>4.Unknown person.....4 | | |
| 205 | Have you had sex in the following place? Circle "1" for yes and "2" for no answers. More than one answers Others. | Yes No<br>1.In the night markets... 1 2<br>2.Relation with mobility of trade .. 1 2<br>3.In wedding place 1 2<br>4...In local ceremony 1 2<br>5. In guest place 1 2<br>6. In alcohol drinking place. 1 2 | | |

| | | | | |
|---|---|---|---|---|
| | | 7. Other (specify).....1 2 | | |
| 206 | Have you ever had sex out of marriage? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | | |
| 207 | Have you ever had sex out of marriage influenced alcohol consumption? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | 2 →209<br>99→209 | |
| 208 | If yes for Q207, was condom used? | 1. Yes.....1<br>2. No..... 2 | | |
| 209 | How many sexual partners do you have now? | 1. One.....1<br>2. Two.....2<br>3.Three & above .....3 | | |
| 210 | Do you participate in the following markets? | Yes No<br>1. Night market .....1 2<br>2. Day market .....1 2<br>3. Both ……..1 2 | | |
| 211 | Why did you participate in night markets? | 1. Trading.....1<br>2. Alcohol drinking.....2<br>3. Meeting partner.....3<br>4. Others.....4 | | |
| 212 | Have you ever had casual sex in relation to night markets? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | 2→ 214<br>99→ 214 | |
| 213 | If yes for Q212, in which market? | 1. Arekit ..... 1<br>2. Bole..... 2<br>3. Kebul..... 3<br>4. Senenina Korfcha .... 4<br>5. Quante..... .5<br>6. Bad..... .6<br>7. Other (specify)..... | | |
| 214 | Have you ever had sexual violence in relation to night markets? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | | |
| 301 | Filter, check 205<br>Have you had sex in the way of night market? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | | |
| 302 | Are you a mobile person for trade? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | 2→Q306<br><br>99→Q306 | |

| | | | | |
|---|---|---|---|---|
| 303 | How long do you stay out side of your partner (Husband/wife) for trade? | Yes No<br>1. 1-6 days.....1 2<br>2. 7-14 days.....1 2<br>3. 15-30 days.....1 2<br>4.1 month-5 months.....1 2<br>5. 6 month-1year.....1 2<br>6. Above 1 year.....1 2 | | |
| 304 | During this your stay out side of your family for trade, Have you ever had sex out side of Marriage? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | | |
| 305 | If yes, for Q304, With whom? | With_____ | | |
| 306 | How did you use condom in outside of marriage in the last 6 month? | 1. Usually I was used.....1<br>2. Occasionally……2<br>3. I did not use…….3<br>4. No response……..……99 | | |
| 307 | If the answer of Q 306 is not used, Why not? | 1. Condom is not available..……1<br>2. No pleasure with condom.....2<br>3. My partner not allow condom.3<br>4. I have no knowledge of condom……4<br>5. Other(specify).....……...5 | | |
| 308 | Have you had sex with the exchange of money or material relation to night markets? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | 2→Q401<br><br>99→Q401 | |

Part IV. Male condom

| No. | Questions and Filters | Coding categories | Skip to | *Code* |
|---|---|---|---|---|
| 401 | Have you ever heard of male condom? (Show picture or sample of one) | 1.Yes.....1<br>2. No.....2<br>3. Don't know.....88<br>4. No response.....99 | <br>2→Q501<br>88→Q501 | |
| 402 | Filter Q208, have you ever-used condom? | 1.Yes.....1<br>2.No.....2<br>3.No response.....99 | 1→Q404 | |
| 403 | If no, Why not? | 1. I am Faithful..... 1<br>2. I don't like..... 2 | | |

| | | | | |
|---|---|---|---|---|
| | | 3. My partner did not allow. 3<br>4. Not available..... 4<br>5. No knowledge of it..... .5<br>6. Other (specify)..... .6 | | |
| 404 | Which places do you know where you can obtain male condom? | 1. Shop.....1<br>2. Health institution.....2<br>3. Hotel.....3<br>4. Anti AIDS club.....4<br>5. Markets.....5 | | |

Part V. HIV/AIDS knowledge, Attitude, practice and risk perception

| No. | Questions and Filters | Coding categories | Skip to | *Code* |
|---|---|---|---|---|
| 501 | Have you ever heard of the virus HIV or an illness called AIDS? | 1. Yes.....1<br>2. Don't know.....88<br>3. No response.....99 | <br>88→503<br>99→503 | |
| 502 | If the answer of Q501 is yes, What was the source of information?<br>(There is more than one answer here so ask by saying others.) | Yes No<br>1. Partner/wife.....1 2<br>2. Social gathering.1 2<br>3. Health worker....1 2<br>4. Religious leader.1 2<br>5. School.....1 2<br>6. Agricultural extension worker.....….1 2<br>7. Friend/relative....1 2<br>8. Leaf lets or brochures..1 2<br>9. Radio.....1 2<br>10. TV.....1 2<br>11.other specify……. | | |
| 503 | In what ways is HIV/AIDS transmitted? | Yes No<br>1. Unprotected sex....1 2<br>2. Mother to child.....1 2<br>3. Circumcision.....1 2<br>4. Skin cutting or Piercing..... 1 2<br>5. Tonsillectomy..... 1 2<br>6. Milk teeth Extraction 1 2<br>7. Unsafe injection... 1 2<br>8. Sharing razor..... 1 2<br>9. Unsafe abortion.... 1 2<br>10. Blood transfusion.. 1 2<br>11. Insect bites..... 1 2<br>12. Eating raw meat.... 1 2<br>13. Other specify | | |

| | | | | |
|---|---|---|---|---|
| 504 | IS HIV/AIDS a curable disease? | 1. Yes.....1<br>2. No.....2<br>3. Don't know.....88<br>4. Not response.....99 | | |
| 505 | Is HIV/AIDS prevents by changing behavior? | 1. Yes……1<br>2. No …….2<br>3. Don't know …..88<br>4. None response ...99 | | |
| 506 | When do you think HIV/AIDS can be transmitted from mother to child ? | Yes No.<br>1. During pregnancy 1 2<br>2. During delivery 1 2<br>3. During breastfeeding 1 2<br>4. Other specify | | |
| 507 | Is it possible for a healthy looking person to have the AIDS virus? | 1. Yes.....1<br>2. No.....2<br>3. Don't know..88<br>4. No response..99 | | |
| 508 | Do you know your status of HIV/AIDS by testing your blood? | 1. Yes.....1<br>2. No.....2<br>3. Don't know...88<br>4. No response...99 | | |
| 509 | If HIV test is available, are you willing to test your blood for HIV/AIDS test? | 1. Yes.....1<br>2. No.....2<br>3. Don't know...88<br>4. No response...99 | 1→Q601<br><br>99→Q602 | |
| 601 | If yes for Q509, say your result be comes Negative what do you do for future? | 1. Changing my behavior ….1<br>2.Testing after 3 month again .2<br>3. Abstaining from sex …..…..3 | | |
| 602 | If the answer for Q 509 is no, Why not? | 1. I fear social stigma..1<br>2. I am faithful.....2<br>3. I usually used condom...3 | | |
| 603 | Have you ever discussed about HIV/AIDS with your partner/family members? | 1. Yes.....1<br>2. No.....2 | | |
| 604 | What are the infections that can be transmitted through sexual contact other than HIV/AIDS? | Yes No<br>1. Gonorrhea.....1 2<br>2. Chancroid.....1 2<br>3. Syphilis.....1 2<br>4. Genital wart .....1 2<br>5. Others(specify)...1 2 | | |
| 605 | Have you ever had any one of these diseases in the last 12 months? | 1. Yes.....1<br>2. No.....2<br>3. No response.....99 | | |

## ANNEXES B.Qualitative data collection

For FGD Guide line checklist

(For trader-, community leaders, Gov't local sector heads and women leaders for focus group discussion 8-10 members based on sex, age, education level, marital status and occupation)

**Introduction**

Good morning! Well come to our group discussion. I am _____ and I came from _____. I am here to day to discuss about the HIV/AIDS. The discussion will be taken one-to-one and a half hours. There is no right or wrong answer. All comments, both positive and negative, are well come, I would like to have many points of view. I want this to be a group discussion, so you need not wait for me to call on you. In order to not miss any points of the discussions. I will be using a tape recorder. Please speak one at a time so that the tape recorder can pickup everything. I would like to confirm to you that all your comments are confidential and used for research purpose only. Your names will not recorded to protect your confidentiality.

Thank you, for participation and genuine discussion one again.

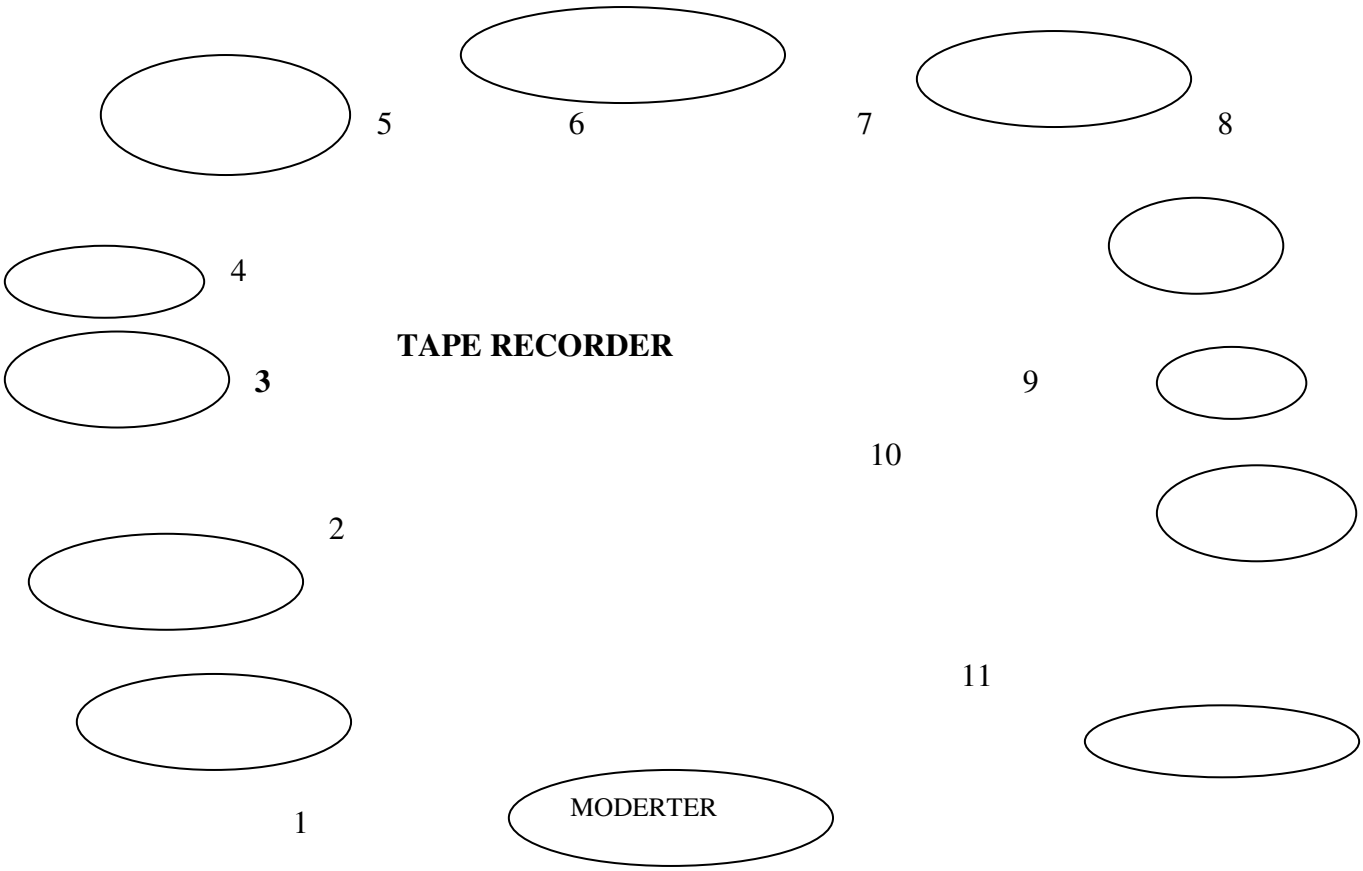
Topic for Discussion:_____Date__/_____/_____

Type of participants:_____Time FGD started:___

No. Of participants:_____Male:_____:Female:_____Time FGD ended:____

Venue of the FGD:_____

**SITTING ARRANGEMENT**



Topic guides for the FGD

Select one of the participants to read carefully the questions/guideline

Topic 1. General issues about HIV/AIDS.

1. Currently, do you think HIV/AIDS is a major health problem in this area? Why? How? Why not?
2. How HIV/AIDS spread in this area in relation to night markets and mobile people?
3. How widespread is the risky behavior for HIV infection in relation to night markets and mobile people? (Who are involved? Where? How? When)
4. What are the types of activities that fuel risk behavior in this area in relation to night markets and mobile people? (Who are involved? Where? How? When)
5. How they are preventing themselves and their partners from HIV/AIDS?
6. Why people are involving in the local night markets for trades?

Part II. Observation

Observation gives more detail and context related information, permits collection of information of facts not mentioned in the questionnaire and tests of the reliability of responses to the questionnaires and serve as a technique for verifying or nullifying information provided in face to face encounters. The observation will be recorded immediately after observations. Considering this, Observation will be made before in-depth interview and quantitative data collection in order to obtain overview of study situation through non-participant observation.

**Observation strategy**

Initially, two key informants will be recruited in order to get the general overview on the selected topic of the study. The recruitment of these key informants will be made by the principal investigator, Woreda health department and HIV/AIDS secretarial office head. The key informants should have knowledge on the topic of the study, experience and trustworthy relationship with the researcher. They will serve as information giver on the topic to the researcher.

The places to observe the risky behaviors will be in or around places like alcohol drinking, Khat chewing and along ways to their home including in (Bushes, Enset or False Banana and around small river or gullies).

The time to conduct the observation will depend on the information which will be obtained from key informants. The characteristics of individuals (like age, special greeting, special signs of communication, whether there is the third person involvement to exchange their message from male to female or vice versa, alcohol drinking, chewing khat, etc) who are suspected to be involved in risky behaviors will be obtained from key informants.

The researcher, based on the information obtained from key informants, he will arrive around the night market places and in such suspected risky places as early as possible. Time (schedule) priority will be made to observe according the information from key informants. The researcher will follow his observation according to the guide checklist, however, he will give strict attention not to be aware of his activities by the individual and the people in the vicinity .He will observe all the situation as a layman person choosing the proper position that is back or front, sitting, standing, walking and keeping appropriate distance accordingly.

In and around the night markets or in the way where there is suspected area for the risk behavior, the researcher will try to reach before the events and take appropriate site without appearing to the individual person and the people in the vicinity and following the events up to the end.

The information will be recorded immediately after the events and sometimes during the events on a piece of paper in the place or in the way of night markets without disturbing the natural flow of events .For this observational study the following guide checklist will be used.

a. Activities performed in the night markets and on the ways
b. Risky place for HIV transmission
c. Types of people involved in risky behavior place
d. From where they come and go?
e. Time they involve, what do they do from there?
f. The size of population involved.

Part III.

Guide checklist for in -depth interview

Initially, key informants will be recruited from the area. Based on these key-informants, information will be obtained Twelve in-depth interviewees will be selected from night markets and surrounding peasant association. These will include among farmers, merchants, tella sellers and students.

The Principal investigator will conduct the in-depth interview before quantitative survey. The researcher will conduct both in-depth interview and observations simultaneously. The in-depth interview will include participatory observation such as probing, smoothing when there is reaction from participant (in-depth interviewee), guiding the discussion along the main topic and

encouraging the participants to express their opinions. In addition, non-participatory observation will be done through proper listening, maintaining eye contact and observing the reaction of the participant.

The in-depth interview will start with simple and general questions, followed by sensitive and personal questions after obtaining consent.

Introduction

Hello! My name is Jemal Yousuf and I came from A.A.U. I am working for a thesis research project conducted in collaboration with A.A.U and EPHA.

Confidentiality and consent- I am going to ask you some very personal questions that some people find difficult to answer. Some of the questions may make you angry or may disappoint you. But since they are very important for the study I ask you to excuse me for asking you such questions. Your answers will be kept completely confidential. Your name will not be written on this form. In order not to miss any points of our conversations, I will be using a tape recorder for this research purpose only with keeping secret what you tell me confidentially and the tape-recorded will be destroyed thereafter. Your honest answers to these questions will help me better understand what people think and say about certain kinds of behaviors. I will greatly appreciate your help in responding to this conversation. The interview would take about_____ minutes. We will conduct the interview in the place you think convenient. Before starting our conversations I need to have your agreement. If you agree, as is done in such kind of research, I want you express your agreement, without mentioning your name, and I will tape record it. Thank you very much.

Socio-demographic characteristics for all individual in-depth interviewee will be asked are: Age ----------, Sex-----, marital status-----, Educational status-------, Ethnicity---Religion---------occupation --------- and other means of income------

**Remember:** Observe the reactions, emotions, expressions and very striking important points and record without interruption of in-depth interview.

**Guideline Question format for Farmers (male and female)**

1. Please tell me why people get involved in this local night markets trades ?

2. Have you been involved in the night markets trade?

3. Please tell me about local people how often do they go to the night markets? How long do they stay there? Why? How are their sexual behaviors in and outside the local areas?

4 .Can you tell me the types of activities, which expose some people to risky sexual behaviors that are performed in and around these local night markets? **Probe**

5. Please tell me about some people who have been involved in risky behaviors such as premarital/extramarital sex in relationship with the night markets? **Probe**

From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why did they do such risky behaviors and some others do not? **Probe**

6. Please tell me about some people who have been involved in casual or sexual violence in relationship with the night markets? Where did they do? How did they get each others? Why did they do? **Probe.**
7. Please tell me about some people who have sex for exchange of money or materials in the relationship with the night markets? **Probe.**
8. Please tell me about some mobile people who have been involved themselves and others in risky sexual behaviors in relationship with the night markets? From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why? How many partners had they have? **Probe**
9. Please tell me how are people feeling and fearing about HIV/AIDS/STDs spreading in relationship with the night markets? Probe.
10. Please tell me again how are those people who having risky behavior preventing themselves and their partners from the HIV/AIDS/STDs? Probe

Now I am asking your life experience and please tell me in detail.

11. Have you ever had alcohol and/or Khat?

With whom? Where? At what time have you had? How often? Why? **Probe.**

12. Have you ever had casual or sexual violence in relationship with the night markets in the last six months? **Prob**e (By influencing with alcohol/Khat or out of these).

With whom? Where? At what time have you had? How? Why? **Probe**

13. Have you ever had sex with CSW in the last six months? Where? At what time have you had? How? Why? **Probe**

14. Have you ever had sex for exchange of money or materials in relationship with the night markets in the last six months? Probe.

With whom? Where? At what time have you had? Why? How? **Probe**

15**.** How many sexual partners do you have now? **Probe**

Why did you have many sexual partners?

16. Do you know male condom?

- **a.** Did you /your partner/use condom in each episode of pre-marital/extra-marital sex in the last six months? **Probe.**
- b. How can you /your partner/use it? Why do you use it?
- c. From where do you get it?

17. Have you ever heard the virus HIV/AIDS?

- d. From where do you get the information?
- e. Can you tell me, the ways of HIV/AIDS transmitted?
- f. How do you prevent yourself and your partner from the HIV/AIDS?

18. Is HIV/AIDS a curable disease?

19. Do you think you can get HIV/AIDS?

How can you know that? Are you willing to have VCT?

20. Can you tell me other STDs and their risky for HIV/AIDS? **Probe**

**Guideline Question format for Merchants.**

1. Can you tell me why people get involved in local night markets trades?

2. Please tell me about local people how often do they go to the night markets? How long do they stay there? Why? How are their risky sexual behaviors in and outside the local areas?

3. What type of activities do you know in this local night markets that might contributes to HIV infection? **Probe (alcohol, Khat..etc).**

4. .Can you tell me the types of activities, which are, exposed some people to risky behaviors that are performed in and around these local night markets? **Probe**

5. Please tell me about some people who are involved in risky sexual behaviors such as premarital/extramarital sex in relationship with the night markets? **Probe**

From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why did they do such risky behaviors and some others do not? **Probe**

6. Please tell me about some people who have been involved in casual or sexual violence in relationship with the night markets? Where did they do? How did they get each others? Why did they do? **Probe**

7 . Please tell me about some people who have sex for exchange of money or materials in the relationship with the night markets? **Probe.**

8 . Please tell me about some mobile people who have been involved themselves and others in risky behaviors in relationship with the night markets? From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why? How many partners did they have? **Probe**

9 Please tell me how are people feeling and fearing about HIV/AIDS/STDs spreading in relationship with the night markets? Probe.

10 Please tell me again how are those people who having risky behavior preventing themselves and their partners from the HIV/AIDS/STDs? Probe

Now I am asking your life experience and please tell me in detail.

11 Have you ever been involved yourself in those activities**?** With whom? Where? How often? At what time? Why did you expose yourself in such activities?

With whom? Where? How often? At what time? Why did you expose yourself in such activities? Probe.

12 At what age, have you had sexual intercourse in the first time?

With whom? Where? At what time have you had? Why? How? **Probe**

13 Have you ever had casual or sexual violence in relationship with night markets in the last six months? Probe.

With whom? Where? How often? At what time? Why did you expose yourself in such activities? Probe.

14. Have you ever had sex for exchange of money or materials in relationship to the night markets in the last six months? Probe.

With whom? Where? At what time have you had? Why? How? **Probe**

Have you ever had pre-marital/extra-marital sex influenced by alcohol-consumption and/or Khat in the last six months? Probe.

15. Please tell me about local peasants how often do they go to the night markets? How long do they stay there? Why? How are they their sexual behaviors in and outside the local areas?

16. How many sexual partners did you have now? Why have you had many sexual partners?

17. Have you ever heard the virus HIV or an illness called AIDS?

A. From where did you get the information? B .How HIV/AIDS is transmitted?

C. Is HIV/AIDS a curable disease?

E .Do you think you can get AIDS?

F .How do you know that?

18. Are you willing to have VCT?

19. How can you prevent yourself and your partner from HIV/AIDS?

20. Do you know male condoms?

A. Did you /your partner/use condom in each episode of pre-marital/extra-marital sex in the last six months? **Probe.**

B. How can you /your partner/use it? Why do you use it?

C. From where do you get it?

21. Can you tell me some other STDs and their risky for HIV/AIDS?

**Guideline Question format for Tella sellers/teji sellers**

1. Can you tell me why people get involved in local night markets trades?

2. What types of activities are performed in this night market? **Probe.**

3. What type of activities do you know in this local night markets that might contributes to HIV infection? **Probe (alcohol, Khat,etc).**

4. Can you tell me the types of activities, which are, exposed some people to risky sexual behaviors that are performed in and around these local night markets? **Probe**

5. Please tell me about some people who have been involved in risky sexual behaviors such as premarital/extramarital sex in relationship with the night markets? **Probe**

From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why did they do such risky behaviors and some others do not? **Probe**

6. Please tell me about local people how often do they go to the night markets? How long do they stay there? Why? How are their sexual behaviors in and outside the local areas?

7. Please tell me about some people who have been involved in casual or sexual violence in relationship with the night markets? Where did they do? How did they get each others? Why did they do? **Probe**

8. Please tell me about some people who have sex for exchange of money or materials in the relationship with the night markets? **Probe.**

9. Please tell me about some mobile people who are involved themselves and others in risky behaviors in relationship with the night markets? From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why?

10. How many partners did they have? **Probe**

11. Please tell me how are people feeling and fearing about HIV/AIDS/STDs spreading in relationship with the night markets? Probe.

12. Please tell me again how are those people who having risky sexual behavior preventing themselves and their partners from the HIV/AIDS/STDs? Probe

Now I am asking your life experience and please tell me in detail.

13. At what age, have you had sexual intercourse in the first time?

With whom? Where? At what time have you had? Why? How? **Probe**

14. Have you ever had pre-marital/extra-marital sex by influencing alcohol-consuming and/or chewing Khat in the last six months? Probe.

With whom? Where? How often? At what time? Why did you expose yourself in such activities? Probe.

15. Have you ever had casual or sexual violence in relationship with night markets in the last six months? **Probe.**

With whom? Where? How often? At what time? Why did you expose yourself in such activities? **Probe.**

16. Have you ever had sex in the exchange of money or materials in relationship with the night markets in the last six months? **Probe**.

With whom? Where? At what time have you had? Why? How? **Probe**

17. How many sexual partners did you have now? **Probe.** Why have you had many sexual partners?

18. Have you ever heard the virus HIV or an illness called AIDS?

A. From where did you get the information? B .How HIV/AIDS is transmitted?

C. Is HIV/AIDS a curable disease? E .Do you think you can get AIDS?

F .How do you know that?

19. Are you willing to have VCT?

20. How can you prevent yourself and your partner from HIV/AIDS?

21. Do you know male condoms?

A. Did you /your partner/use condom in each episode of pre-marital/extra-marital sex in the last six months? **Probe.**

B. How can you /your partner/use it? Why do you use it?

C. From where do you get it?

22. Can you tell me some other STDs and their risky for HIV/AIDS? Probe.

**Guideline Question format for Student.**

1 .Can you tell me why people get involved in local night markets trades?

2. What type of activities do you know in this local night markets that might contributes to HIV infection? **Probe (alcohol, Khat, etc).**

3 .Can you tell me the types of activities, which are, exposed some people to risky sexual behaviors that are performed in and around these local night markets? **Probe**

4. Please tell me about some people who have been involved in risky sexual behaviors such as premarital/extramarital sex in relationship with the night markets? **Probe**

From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why did they do such risky behaviors and some others do not? **Probe**

5. Please tell me about some people who have been involved in casual or sexual violence in relationship with the night markets? Where did they do? How did they get each others? Why did they do? **Probe**

6. Please tell me about some people who have sex for exchange of money or materials in the relationship with the night markets? **Probe.**

7. Please tell me about some mobile people who have been involved themselves and others in risky behaviors in relationship with the night markets? From where did they come? How did they conduct their sexual partners? Where did they do? At what time did they involve? Why?

8. Please tell me about local people how often do they go to the night markets? How long do they stay there? Why? How are their sexual behaviors in and outside the local areas?

How many partners did they have? **Probe**

9. Please tell me how are people feeling and fearing about HIV/AIDS/STDs spreading in relationship with the night markets? Probe.

11. Please tell me again how are those people who having risky behavior preventing themselves and their partners from the HIV/AIDS/STDs? Probe

Now I am asking your life experience and please tell me in detail.

11. How are you studying your subjects?

12. Are you chewing Khat/or are you consuming alcohol in your study?

With whom? Where? How often? At what time? Why did you expose yourself in such activities? Probe.

13. Have you ever had pre-marital sex influenced by alcohol-consumption and/or Khat in the last six months? Probe.

With whom? Where? How often? At what time? Why did you expose yourself in such activities? Probe.

14. At what age, have you had sexual intercourse in the first time?

With whom? Where? At what time have you had? Why? How? **Probe**

15. Have you ever had casual or sexual violence in relationship with night markets in the last 12 months? **Probe.**

With whom? Where? How often? At what time? Why did you expose yourself in such activities? **Probe.**

16. Have you ever had sex for exchange of money or materials in relationship with the night markets in the last 12 months? **Probe**.

With whom? Where? At what time have you had? Why? How? **Probe**

17. How many sexual partners did you have now? **Probe.** Why have you had many sexual partners?

18. Have you ever heard the virus HIV or an illness called AIDS?

A. From where did you get the information? B .How HIV/AIDS is transmitted?

C. Is HIV/AIDS a curable disease? E .Do you think you can get AIDS?

F .How do you know that?

19. Are you willing to have VCT?

20. How can you prevent yourself and your partner from HIV/AIDS?

21. Do you know male condoms?

A. Did you /your partner/use condom in each episode of pre-marital/extra-marital sex in the last six months? **Probe.**

B. How can you /your partner/use it? Why do you use it?

C. From where do you get it?

22. Can you tell me some other STDs and their risky for HIV/AIDS? Probe.

Declaration

I, the undersigned, declared that this is my original work, has not been prepared for a degree in this or any other University, and that all sources of materials used for the thesis have been fully acknowledged.

Name Jemal Yousuf

Signature _____

Place Addis Ababa, Ethiopia

Date of submission_____

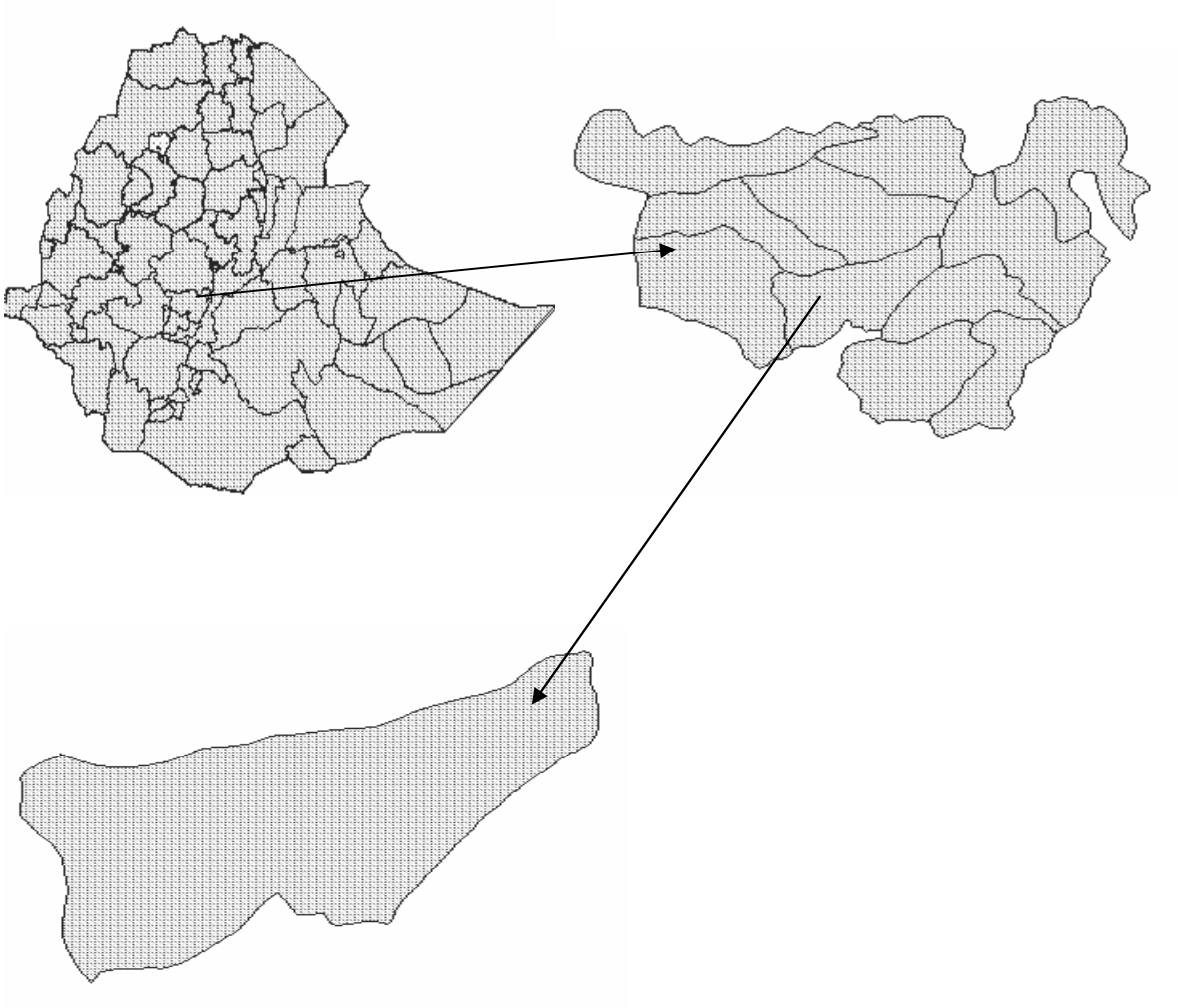
This thesis has been submitted for examination with my approval as University advisor

Name _____

Signature_____

Annex E :Map of Gurage Zone

ETHIOPIA GURAGE ZONE



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