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DEPARTMENT OF COMMUNITY HEALTH

Perception of the risks of sexual activities among out-of-school adolescents in South Gondar Administrative Zone, Amhara Region

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By

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DECLARATION

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

Name: _____

Signature: _____

Place: _____

Date of Submission: _____

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

Name: _____

Signature: _____

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LIST OF ABBREVIATIONS

AAU	Addis Ababa University
AIDS	Acquired Immunodeficiency Syndrome
FCSW	Female Commercial Sex Workers
DCH	Department of Community Health
DHS	Demographic and Health Surveys
FGD	Focus-Group Discussions
FHI	Family Health International
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
MoH	Ministry of Health
MF	Medical Faculty
NGOs	Non-governmental Organizations
RH	Reproductive Health
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
WHO	World Health Organization

ABSTRACT

The vast majority of sexual intercourses during adolescence are unprotected, and therefore the risk of unwanted pregnancy, unsafe abortion, and STIs including HIV/AIDS is very high for adolescents. Although various surveys have been made to study the sexual behavior of youth in Ethiopia, few studies considered the problem of out-of-school and rural adolescents. This cross sectional comparative survey was carried out to assess and compare the level of sexual behavior and perception of the risks of sexual activities among urban and rural out-of-school adolescents in South Gondar Administrative Zone, the Amhara Region. A total of 763 out-of-school adolescents were interviewed and four focus group discussions aggregated by sex and residences were conducted. More than 90% of adolescents in this study were aware of HIV/AIDS. About 42% of the respondents were sexually active. Seventy-six (23.3%) of the sexually active respondents claimed to have more than one sexual partners. About 25% of sexually active male adolescents visited female commercial sex workers of which only 36 % reported ever using condom and none of them reported consistent condom use during commercial sex. Despite this all, participants' attitude towards perceiving themselves as susceptible to HIV infection indicated that only 11 (5.3%) of the rural and 13 (11.2%) of the urban sexually active adolescents were aware of being engaged in high risk sexual practices. Risk perception to HIV infection was higher in urban adolescents [3.577(1.028,12.449)] than in rural. Marital status of respondents, their educational status, and reported number of sexual partners were also associated to their risk perception. The result of the focus group discussion increased our understanding how the socio-economic and cultural environment influence adolescents' sexual behavior, and why adolescents are involved with unsafe sexual practices even when they know the risks. Enabling the community to understand adolescents' sexuality, providing accurate information, and promoting adolescent friendly sexual and reproductive health are essential, even when adolescents are aware of the risks of sexual activities.

1. INTRODUCTION

Adolescence, which WHO defines as the age between 10 and 19 years, is characterized by a series of physiological, anatomical and psychological changes to which young people need to adjust within a changing socio–cultural environment. It is often characterized by a pattern of thinking in which immediate needs tend to take priority over long-term implications (1).

Although there are great variations between and within geographic regions, most women and men, married and unmarried, become sexually active during adolescence (2). Moreover, the vast majority of sexual intercourse during this period is unprotected; and therefore the risk of unwanted pregnancy, unsafe abortion, and STIs including HIV/AIDS is very high. Lack of accurate knowledge about reproduction and sexuality, lack of access to health services including contraception, and vulnerability to sexual abuse puts adolescents at the highest risk (3).

It is true that experimentation is a normal part of adolescents' development, which could also expose them to health risks. However, it can often be very difficult to practice safe sex, even when we know the risks of unsafe sex, due to some barriers that come from the wider environment (3). Therefore, the reason for adolescents being unable or unwilling to adopt safer practices also reflects a socio-economic and socio-cultural environment that motivates them to begin having sex at an early age. A number of factors operating in developed and developing countries have contributed to changes in sexual and reproductive health risks of adolescents. These include lowering age of menarche, an increase in age at marriage, changes in values brought about by increasing urbanization, exposure to foreign cultures through tourism, migration and mass media, and decline in the extended family (4).

Several studies in Ethiopia have shown that 17 to 60 percent of adolescents are sexually active, the figure being relatively higher for out-of-school adolescents compared to in school (5 - 17). At present, the reproductive and sexual health of young people in the country is generally affected by the major social changes that affect this segment of the population. Internal migration, lack of parental support, or oversight, and forced idleness places young people at considerable risks of unwanted pregnancy, unsafe abortion, and STDs including HIVAIDS (18).

In many countries concern about adolescents' sexual and reproductive health is increasing, in part because of real or perceived increases in their sexual activity and rates of pregnancy outside marriage, and in part because of high rates of the Human Immunodeficiency Virus (HIV) infection and Acquired Immunodeficiency Syndrome (AIDS) among adolescents (19).

Several studies conducted in developed and developing countries alike, showed that adolescents' high-risk behaviors are more common among out-of-school adolescents compared with those who are attending school (22).

Although various surveys have been made to study behavioral factors affecting youths in Ethiopia, most of these studies were conducted in major towns, and considered the problem of in-school youth only. Moreover, almost all of these studies depended only on quantitative data. This indicates that there is still a need to have more information on sexual behavior of adolescents.

Thus, in order to generate further information on risk and protective factors related to adolescents' sexual behavior and practices, this cross sectional comparative study was conducted among out-of-school adolescents living in rural and urban settings. The study also considered the advantage of collecting combined quantitative and qualitative data.

To achieve its purpose, this study attempted to answer questions like: how do adolescents perceive the risks associated with sexual activity? how do these perceptions differ with places of residence? how aware are rural and urban out-of-school adolescents to prevent such risks? and what stops them from taking preventive measures?

The information obtained from this study is believed to provide insight into the sexual and reproductive health of rural and urban out-of-school adolescents. At the same time, it will contribute to carefully design initiatives that are targeted to address the reproductive and sexual health needs of adolescents.

2. LITERATURE REVIEW

2.1. Background

Adolescence is the time of transition from childhood to adulthood. It is a time of physical, psychological and social changes. These changes have their own specific characteristics in each cultural context, and they are in a steady change according to the development of the society. Even the physical maturation during adolescence is subject to these changes (22). Depending on the purpose they are made for, definitions vary as to the exact age range of adolescence and the physiological and psychological events that characterize it (23). An entirely biological definition, starting with some index of puberty and ending with the ability to reproduce effectively, would leave out social considerations of practical importance (24). Hence, for

general population statistics relevant for health planning and other functions, the term adolescence has been defined by WHO as including those aged 10 to 19 years (24).

About one fifth of the worlds' population is between the age of 10 and 19 years, and four out of five young people live in developing countries (25). In Sub-Saharan Africa 1 in 4 Africans is an adolescent (26). According to the 1999 population profile, about 24 % of the total population in Ethiopia are adolescents in the age group of 10 to 19 years (27).

Over the past hundred and fifty years, improved socio-economic standards and nutrition have brought about changes in the physical aspects of adolescence: the age of onset of sexual maturation has been decreasing; growth and physical development are proceeding at an accelerated pace; and there has been a trend towards ultimate adult size (28). Through time, progressive changes in the economic structure, in the media and in the community have all affected the way adolescents live and interact with peers and with the rest of the society. The parental role started to be influenced by socio-economic factors like rise in the number of working women, in the number of families having both parents working, in the rate of divorce resulting in single parenthood, in freedom of adolescents from parental guidance and this in turn resulting in peers playing more significant role than ever before (29, 25). Thus, adolescence becomes a process of breaking away into superego, with parents and adults increasingly being absent and peer groups assuming more roles. In the mean time adolescents develop a sense of idealism of being understood, further complaining that adults fail to see every part of them. They are often ambivalent about their role, sometimes acting as older, and sometimes as younger without any cultural clues to guide them. These universal symbols of adolescents may

force them into harder choice to define them, while the role of ambivalence together with the combination of idealism and egoism can prove very confusing for many adults in understanding adolescents (29).

As adolescence is a time of choices, it involves gaining autonomy, assuming responsibility, and making choices about health, family, career, peer, and school. The ability to confront these decisions effectively is important to the well being of adolescents (30). However, since adolescents are more mature physically than mentally or emotionally, they are often ill prepared to make the serious decisions they face (19). Therefore, they are frequently influenced to participate in behaviors that place their health at risk or impair their social competence, often called risk-taking or health-compromising behaviors. Risk-taking behaviors relatively common among adolescents include early and unsafe sexual activities, premarital sex, having multiple sexual partners, use of alcohol and drugs, violence and dropping out of school (19).

The health, attitudes and actions of adolescents define the future of any society, as they will grow into adults and parents of tomorrow. However, the issue of adolescents' sexual and reproductive health was for the first time given the necessary attention and discussion on the International Conference for Population Development (ICPD), in 1994, in Cairo. The principle endorsed by the ICPD then to be implemented by all participating governments including our country was that: young people not only need but also have the right to reproductive health information and services (22). On political level, this included a call for acceptable and accessible services for reproductive health education, information and care for young people of

both sexes, protecting and promoting the rights of adolescents to privacy and confidentiality, and respect of their personal and professional advice (22).

2.2. Sexuality

Initiating sexual activity is a natural transition made nearly by all humans. Nevertheless, it is not the occurrence of this transition but its timing and the circumstances under which it occurs that has significant implications (31). Young peoples' sexuality and its squeal has become a major public health concern all over the world. Though previously not given much attention, the situation has changed drastically over the past 10 years or so even in very conservative societies (31).

Health surveys and social studies conducted in different parts of the world, in recent years have indicated that, in many countries, most teenagers (60% to 70%) are sexually active (32). However, a general overview shows that the circumstances of adolescents in developing countries with respect to sexual behavior vary tremendously both across and within regions (19). Studies indicate that unmarried women in some parts of Asia and Latin America begin sexual activity later than their counterparts in sub-Saharan Africa; in Singapore, for example, much less than half of young women report having sex before the age of 25 years (2). Similarly, adolescents aged 15 to 19 years who had practiced sexual intercourse in Latin America vary from 18.4% in Peru to 30.1% in Paraguay (19). In contrast, 48% of women in Bangladesh are married and sexually active by the age of 19 years (33). In Sub–Saharan Africa, a number of adolescents are engaged in sexual activities. For example, a survey conducted in Guinea to study sexual behavior and attitude of unmarried adolescents showed that, overall, 50% of female

and 76% of male participants of 15 to 24 years were sexually experienced (34). Among urban women aged 20 to 24 years, three-fourth in Botswana, Liberia, Togo, and Uganda, and two-third in Ghana and Kenya reported to have been engaged in premarital sexual activity before the age of 20 years (35). In Kenya, one study of nearly 10,000 schoolgirls documented that they lost their virginity at a mean age of 14 and 15 (36). Another study in Kenya showed that mean age at first coitus for males was 15.1 while it was 16.0 years for females. Together with the lowest age at first coitus, it has also been shown that by age 19 up to 75% of people will be sexually active (31).

Studies conducted in different parts of the country showed that the mean age for the first sexual contact for Ethiopian adolescents is between 13.6 and 19 years (7 - 13). The 2000 Ethiopian Demographic and Health Survey also found out that the median age for first sexual intercourse was 16. 3 years (27). Several studies, in Ethiopia, have shown that between 17.5 and 50 percent of school adolescents to be sexually active. Students in major urban centers and male students were sexually more active than students in rural centers and female students (8 - 12). Few studies have been conducted among out-of-school youth in Ethiopia. The findings from these studies have showed that the rate of sexual activity is relatively higher (50% to 60%) among out-of-school adolescents than high school students (5 - 8). Studies conducted in Bahr-Dar, Awassa, and Addis Ababa (Central towns) in 1994, 1995, and 1999, reported that the mean age at first coital experience were 16.9 $\pm$ 2.0 years, 17.7 $\pm$ 2.0 years, and 17.7 $\pm$ 2.3 years, respectively (8, 7, 6).

A study done in 1990 on sexual behaviors among senior high school students in Addis Ababa, Ethiopia, showed that the age of the respondents at first sex ranged between 12 and 18 years.

Most (70.5 %), however, had first sex between the ages of 14 and 16 (14). A study conducted among students of Gondar College of Medical Sciences in 1990 revealed that 66 out of 164 (40.2%) of respondents, at the mean age of 17 years, had already practiced sexual intercourse (15).

The practice of multisexual contact is one of the major factors for transmission of HIV-STIs. According to UNAIDS (1999) report, men in Cameroon on an average reported 10 life time sexual partner, compared with 5 in Kenya, 4 in Zambia and Benin. Women in Cameroon reported 3, compared 2 in the other three cities (37). Study among adolescents attending teen health clinics in USA showed that in a one year period 40.3% of females and 69.4% of males aged 14 to 19 had more than one partners (38). Similarly a recent study in the Amhara Region among out-of-school adolescents reported that 46.9% of the sexually active had more than one sexual partner (5).

2.3. Sexually Transmitted Diseases and HIV/AIDS

At least 333 million cases of STDs occur each year (39). These diseases commonly cause discomfort, pain, and discharge though the symptoms are more easily identified in males than in females. They may lead to death or serious complications especially in women, including pelvic inflammatory disease, which is a major cause of pain and leads to infertility. STDs can be passed to infants during pregnancy and childbirth. Their effects range from miscarriage and stillbirth to blindness and pneumonia in the newborn. There is strong evidence that the presence of STDs increase the risk of infection with HIV (40).

Young people are among the population groups who are at high risk of STIs including HIV/AIDS. The latest UNAIDS/WHO report estimated that there were 42 million people living with HIV, at the end of 2002 (41). The HIV epidemic has been particularly sever in Sub-Saharan Africa where this report estimated that there are 24.9million people living with HIV of which one third are younger than 25 years of age.

The earliest evidence of HIV infection in Ethiopia was found in 1984, with the first case reported in 1986 (41). Since 1984, a cumulative total of 107,575 cases were reported to the Ministry of Health (41). The major route of transmission of HIV infection in Ethiopia is heterosexual intercourse, the common practice of multiple sexual partners contributing to the existing high prevalence of HIV infection in the country. Based on the data obtained from National Sentinel Surveillance System, the 2001 estimate of HIV prevalence in Ethiopia is 6.6% (42). The prevalence rate is continuing to be high at 13.7% for urban area, while it remains relatively low at 3.7% rate for rural areas. The highest prevalence is seen in the age group of 15 to 24 representing “recent infections” (41).

In Ethiopia, information on the prevalence of various STDs is often lacking. However, few studies conducted in some parts of the country among out-of-school youth revealed that the prevalence of self reported STDs were 6.5 %, 4% and 6% in Bahirdar, Awasa, and Addis Ababa, respectively (8, 7, 6).

2.4. Early Pregnancy and Abortion

Childbearing to girls in early adolescence has increased health as well as social and economic problems. Young women who have not reached full physical and physiological maturity are almost three times as likely to die from complications in childbirth as older women (42). It has also been found that pregnant women under 15 are 4-8 times more likely to die during pregnancy and childbirth than those aged 15 to 19 (21). Globally, more than 10% of all births are to women 15 to 19 years of age (21). Childbearing among adolescents in Africa is a relatively common event. In the first half of 1990s, at least 1 out of every 5 teenagers in Sub-Saharan Africa had one or more children, or at least was pregnant. The majority of teenagers in most Sub-Saharan Africa will have a child by their 20^{th} birthday (42). Studies in Ethiopia also show the same findings. A study conducted in Addis Ababa among youth reported that 25.7% of female respondents were pregnant (6). A recent survey among out-of-school adolescents in the northern part of the country also indicated that 23.9 % of the participants had at least one pregnancy (5). Survey results in almost all Sub-Saharan Africa indicated that more than one fifth of recent births were being reported as unintended (42). Similarly, in Ethiopia, unintended pregnancy was found to be 15%, 30% and 50 %, in Harar, Gondar and Koladiba, respectively (13, 12, 43).

Pregnancy related complications including induced abortion are the main causes of death worldwide among women aged 15 to 19 years (44). However, socio-economic conditions, access to antenatal care and to clinical interventions, and the quality of interventions are decisive. The consequences of unsafe abortions are probably the gravest threats to young

women's health in Africa. Clinical data from several countries show that illegally self-induced abortion by young women form an important part of all abortion admissions and that number is increasing. The incidence of abortion is not obviously known. The cases seen in health institutions present only the tip of the iceberg and there are few community-based studies. In many African countries, up to 70% of all women hospitalized for complication of abortion are younger than 20 years of age (42).

A community-based study in rural Nigeria found, for example, that 24% of sexually active adolescent girls reported having had an induced abortion (45). Similarly, a study in Ghana found that 25% of women under the age of 20 years had terminated pregnancy by illegally induced abortion and mostly under dangerous conditions. Schools promote induced abortion in case of unplanned pregnancy since in many countries pregnant girls are expelled. The biggest problem related to teenage abortions in nearly all Sub-Saharan countries is the fact that they are illegal. Of 38 countries only nine permit abortion for reasons other than health or eugenic threats. Being illegal means that teenagers, especially, are likely to undergo unsafe and dangerous abortion as they often lack money to pay for skilled practitioners (42).

In Ethiopia, abortion is illegal except on certain medical grounds, and untrained individuals often terminate unwanted pregnancies in hazardous conditions (46, 47). Different hospital based studies revealed that 25% to 57.5% of induced abortion cases are in the age group of 15 to 20 years (48, 49). According to estimates made some ten years back from hospital-based studies, 25% to 30% of deaths due to complications of abortion occur in those who are under the age of 20 years (50). A recent survey among out-of-school youth in Addis Ababa found out that 57%

of sexually active girls reported to have been pregnant, of which 42.4% had abortion, and illegal abortion was reported in 72% of the abortions, of which about half were induced by local people in the villages (6). Similarly out of 148 abortion cases admitted to Debremarkos Hospital from July 1999 to June 2000, 140 (94.6%) were induced abortions in under 30 years of ages (51). Access to safe abortion would save the lives of many female adolescents in Africa. In the United States of America 42% of teenage pregnancies are terminated by induced abortion under safe conditions and with minimal morbidity (52).

2.5. Trends in Knowledge and Practice of Risk Protection

Despite the fact that knowledge about human sexuality, the HIV infection, and possible methods of its transmission has increased, it is evident that young people know very little about reproductive health and their own biology, and that they are often victims of their own misconception about the risks and dangers of unsafe sexual relations (22). There is a great lack of knowledge among young people about how they can protect themselves from HIV/AIDS and other STDs. For example, in Mozambique where HIV prevalence is high at a rate of 13 percent, the vast majority (74%) of girls and 62% of boys between 15 and 19 years were unable to name a single way to avoid transmission of the infection (31).

In Ethiopia, a study conducted among high school students in Addis Ababa reported that only 43.2% of the sexually active knew about condom on their first coital encounter, and a small proportion (17.6%) of them used it on their first sexual encounter (16). A study in northwest Ethiopia also indicated that 45.7% of rural high school adolescents were found using condom (12). Survey on out of school youths in Bahir Dar revealed that 30. 5% of youths were using

condom (8). Similarly, a study on out-of-school youths in Awassa revealed that only 27.6% of the sexually active adolescents used condom during their most recent sexual intercourse, while their knowledge regarding HIV/AIDS was found to be 90% (7). A recent study among out of school adolescents in Addis Ababa found that 57.2% of the study subjects reported having used condom (6). Negligence, embarrassment in buying it from shops and pharmacies, lack of knowledge about its importance, and fear of reduced sexual pleasure are frequently mentioned in these reports as reasons for non use of condom (12, 14).

Knowledge may be a necessary but insufficient requirement to reduce high-risk activities. Adolescents, who have knowledge of how to protect themselves, still do not consider that they are at any risk of getting AIDS. For instance, both in Zambia and Zimbabwe, where HIV prevalence is very high (19% and 25% respectively), though a relatively high proportion of girls can name ways to protect themselves, they still do not consider that they are at risk of acquiring AIDS (31). The first National Behavioral Surveillance Survey, which was conducted very recently in Ethiopia also found out that significant proportion of the population, particularly the youths, are at high risk of HIV infection despite high level of knowledge about HIV/AIDS (53). According to this survey, 84 % of urban out-of-school adolescents who had unprotected sex with non-marital partners do not feel that they are at risk.

Several misconceptions abound among adolescents concerning condom use. According to a study in Uganda, for example, a general concern was expressed among focus group participants that condom use indicates infidelity or having HIV/AIDS. Condom use was also considered

unacceptable to both male and female participants in this study because of perceived reduction in male sensitivity during sexual intercourse (54).

The data from DHS and numerous youth surveys show that even when young people have considerable awareness of the existence and usefulness of contraception, there is a wide gap between contraceptive knowledge and use. This could be due to insufficient or incorrect information, limited access, cost, social or cultural barriers, low social status and decision-making power (22). In Sub-Saharan Africa, the proportion of women aged 15 to 19 who reported that they were using family planning methods ranged from 2% in Niger, Rwanda, and Senegal, to 23% in Cameroon (55).

In currently married adolescent women contraceptive use is low. Report from 19 countries of the sub-Saharan Africa indicated that only 3% of currently married women ever use a contraceptive method. There is, however, enormous regional variation, from 1% in Uganda and Mali to 27 % in Zimbabwe (42). This is hardly surprising since adolescent women at the beginning of their reproductive life are-once married-under strong social pressure to have children. (42).

A nation wide survey conducted to assess determinants of contraceptive use among urban youths in Ethiopia reported that there is a large discrepancy between knowledge and actual practice of contraception. In this study, knowledge about contraceptive method among sexually active young adults aged 15 to 29 was as high as 90% for pill and 87% for condom respectively. However, only 15% of males and 39% of females had used condom and contraceptives respectively (14). Similarly, evidence from Harar, eastern Ethiopia, indicated that nearly two

thirds of young respondents (69.3% of males and 63.9% of females) reported to have known, at least, one contraceptive method while only about one fourth (27% males and 22.6%females) reported having ever used a method (13). Another study conducted in northwest Ethiopia showed that only 25% of sexually active females used modern contraceptive (12). Most adolescents mentioned fear of side effects, misconception that pregnancy could not occur, partner's opposition, and desire to have children to be important reasons for not using modern contraceptives (12,14).

In summary, most women and men become sexually active during adolescence and the vast majority of sexual intercourse during this period is unprotected.

Lack of accurate knowledge about reproduction and sexuality, lack of access to health services including contraception, and lack of other social services put adolescents at the highest risk. Moreover, the rapid social changes like urbanization, forced idleness, lack of parental support or oversight, places adolescents at considerable risks to unwanted pregnancy, unsafe abortion and STDs including HIV. Therefore, it is very difficult to adolescents to practice safe sex even when they are aware of the consequences of unsafe sexual activities due to some barriers that come from the wider socioeconomic and cultural environment.

On the other hand, addressing the sexual and reproductive health of out-of-school adolescents often remains difficult, as they are usually considered hard to reach. Thus, this study was planned to further understand the pattern of sexual practices and risk perception among rural and urban out-of- school adolescents in relation to socio-cultural and economic factors that characterize their sexual behavior.

3. OBJECTIVE

3.1. General Objective

To assess and compare the level of sexual behavior and perception of the risks of sexual activities among urban and rural out-of-school adolescents with particular emphasis to HIV/STIs and unwanted pregnancy.

3.2. Specific Objectives

- Assess risky sexual behaviors among study groups

- Assess the perception of the risks of sexual activities among study subjects.
- Compare the level of self-risk perception of STIs/HIV, among rural and urban out-of-school adolescents.
- Identify some of the barriers to safer-sex practice among sexually active out-of-school adolescents.

4. METHODS

4.1. Study Design:

This cross-sectional comparative study was carried out to describe and compare the perception of risks of sexual activity among rural and urban out-of-school adolescents in South Gondar Administrative Zone, Amhara Region.

4.2. The Study Area

South Gondar Administrative Zone is one of the 11 zones in the Amhara National Regional State, which is located in the northwestern part of Ethiopia. It is bounded by North Gondar in the north, South and North Wello in the east, West Gojam in the south and Lake Tana in the west. Administratively, the zone is divided into 10 woredas and further subdivided into 279 rural and 32 urban kebeles.

Based on the 1994 National Population and Housing Census of Ethiopia, the population of the zone as projected for July 2002 was approximately 2 million with 1: 0.96 male to female ratio (22). Of the total population about 24% are in the age range of 10 to 19 years. About 93%of the total population live in rural areas depending on traditional rain fed agriculture, where as 7% are urban dwellers. The gross primary school enrollment rate and the physical health service coverage of the zone were 48.24% and 40% respectively in the year 2001/2002 (56).

The capital of the zone, Debretabor, is located 666 kilometers northwest of Addis Ababa, about 100 Kms. from Bahir-Dar, the capital of the Amhara Region. It is subdivided into 9 kebeles and has a council that is responsible for political and administrative affairs. As of July 2001, there are about 32,000 people living in the town, of which 28% were adolescents (62). There are a total of 6 different health institutions in the town. Two are under government ownership (one health center and one hospital). One clinic is privately owned. In addition, there are one pharmacy owned by the Ethiopian Red Cross Society, one public drug store, and one private drug vendor in the town. There are six primary schools, one secondary school and one technical

school. There are also one nursing school and one vocational training center in the town owned by the Government.

4.3. Study Population

The source population included all out-of-school adolescents in Debretabor twon and all out-of-school adolescents in rural kebeles of Farta Woreda. The study population is all out-of-school adolescents in 4 randomly selected urban and 8 randomly selected rural kebeles.

Inclusion criteria: Those aged 10 – 19 years; who are not currently attending any school (never attended or dropouts); who have resided in the selected Kebeles for at least a year; and who are not employed /working in the formal sectors during the time of data collection.

4.4. Operational Definition

Adolescents: those who are in the age group of 10-19 years

Out-of-school adolescents: those adolescents who are not currently attending formal education (those who never went to school, or who dropout) and who are not employed in the formal sectors

Knowledgeable: those who mentioned all the three possible methods of HIV-STIs prevention (abstinence, be faithful to one sexual partner, and condom use).

4.5. Sample Size

The sample size is calculated based on the following assumptions: -

Prevalence of urban out-of-school adolescents who feel that they are not at risk, having reported unprotected sex with non-marital partners (P_1= 86%)

Since there is no study on risk perception of rural out-of-school adolescents a difference of 10% is considered between the two groups (P_2= 96%)

Level of confidence = 95% (α = .05)

Power = 80%

Urban to rural population allocation ratio =1:2

15% non- response rate

Design effect=2(Since the sampling procedure involves more than one stage)

With the above assumptions, the sample size was calculated using the STATISTICAL program of EPI6 computer software statistical package and the overall sample size was found to be 801 (n_1 = 267; and n_2 =534). The number of subjects to be interviewed was allocated to each kebele using the principle of probability proportional to size (P.P.S.).

4.6. Sampling Technique

A multistage random sampling that considers fair representation of all out-of-school adolescents in Debretabor town and rural parts of Farta Woreda was employed. To have a good representation of the rural community, all semi-urban kebeles in Farta Woreda was excluded.

The study population was drawn using a systematic sampling method. First, woredas then eight rural and four urban kebeles were selected randomly. The total number of households was identified through reviewing records in each kebele administrative office. Then, the total number of households was divided to the required sample size in each kebele independently. Finally, the first household number was selected randomly and a sampling interval of every n^{th} household was visited to get the required number of study subjects in each one of the selected

kebeles. When no eligible was found in a selected household or the eligible individual in the selected household refused the interview, the immediate higher household number was taken. Households that serve only for living purpose were included for enumeration; shops, food and drinking establishments, and other commercial undertakings were excluded.

4.7. Data Collection

Twenty interviewers (10 female and 10 male) that completed 12 th grade; unmarried; age of 20-25 years; free of any addiction; fluent in Amharic language and familiar with local customs; and who are physically fit were recruited.

Two supervisors (health workers with better experience) were selected. The recruitment of supervisors was done together with the zonal health department. They were responsible to lead the data collectors, to check the questionnaire, and to correct any problem with the principal investigator

Training was given for both the interviewers and the supervisors for three days before the pretest and for a day after the pretest. The training included a briefing on the general objective of the study; discussing the contents of the questionnaire one by one; general techniques of interviewing; and, more importantly, how to keep confidentiality and privacy. The training was given in the form of discussion and role-playing.

Structured questioners were used to collect information from individual respondents. The questionnaires were developed after review of relevant literatures. A number of questions that

can address the objectives of the study were gathered and adapted from previous similar studies and other materials. The questions and statements were grouped and arranged according to the particular objectives that they should be address. Then, the first draft of the questionnaire was produced and submitted to the advisors and colleagues. Valuable comments were taken from these individuals to improve quality of the instrument. After extensive revision, the final version of the English questionnaire was developed. At the end, the final English version was translated to Amharic by an individual who has a very good command of both English and Amharic languages, and again back to English by another individual who has the same language ability so as to ensure its validity and consistency.

Pretest of the questionnaire was carried out in Woreta town, which is located 40 km from Debretabor town; with a population that, more or less, has similar socio-demographic characteristics with the people of the study area. The result of the pretest was discussed with, and some corrections and changes were made on the questionnaire.

During the actual data collection, the supervisors traveled to study sites every day and checked the filled questionnaires for completeness, accuracy, and clarity. The principal investigator and the supervisors rechecked 20 % of the sample each day to see whether the interviewers have done their job correctly or not. Anything that was unclear or ambiguous was corrected on the next day.

A total of four focus-group discussions (FGD) disaggregated by sex and residence, were conducted using semi-structured, open-ended questionnaires in order to provide more insight

into the complex pattern of sexual behavior and motivations of out-of-school adolescents in the study area. Supervisors and local leaders solicited volunteers for each group and participants from different urban and rural kebeles were included.

Since most studies suggest that most of the adolescents would be likely to have initiated their first sexual experience at 17 to 19 years of age, all participants were selected from this age group, with the assumption that the discussion would reflect the sexual experiences of adolescents. Although 12 participants were initially selected for each group, the final size of the group ranged between 9 and 10 with an average age of 17.4 years for females and 17 years for males due to age screening.

The principal investigator moderated the discussion of the male groups, while a female nurse who was trained by the principal investigator moderated that of the female groups. One male and one female assistant were also trained to organize the focus groups, and handle the tape recording and note taking during the discussions.

Each session was taped and the principal investigator together with moderators and note takers transcribed the tape after each session. Although divers opinions were expressed within each group, preliminary coding of transcripts was done and consistent themes that are directly related to the objectives of this study were identified.

4.8. Study Variables

The analysis focused on the following selected variables: -

Independent variables-

- Socio-demographic characteristics: places of residence, age, sex, marital status, education, perceived family income, and parental relationship
- Sexual behaviors, such as history of sexual activity, number of lifetime partners, and use of contraception including condom

Dependent variables

- Perception of risk towards STI/HIV
- Condom use
- Willingness to VCT

4.9. Data Processing and Analysis

Dummy tables that consider the main research questions were drafted after designing the questionnaires. Once the data was collected, it was categorized and coded on a well-drafted coding sheet. The data was entered into the computer and analyzed using EPI INFO and SPSS software. During the analysis, frequencies of different variables were determined, and chi-square test was performed on some selected variables. Odds ratios were calculated to determine the strength of associations of selected variables. Logistic regression was applied to control the effects of each explanatory variable on the outcome variables using SPSS software. The qualitative data was compiled and summarized manually.

4.10. Ethical Considerations

Before the study begins, ethical clearance was obtained from the Ethical Committee of Addis Ababa University. Then, officials at different levels in the Amhara region was communicated through formal letters from the Department of Community Health, Faculty of Medicine, AAU. Moreover, respondents and their guardians were informed about the objectives of the study and verbal consent was obtained from each respondent. To ensure privacy and confidentiality the interview took place in a convenient place chosen by respondents and the information was collected anonymously.

5. RESULT

From the total of 801 adolescents who were identified for the study, 763 were successfully interviewed while 13 refused to participate in the study and 25 could not be available at home after repeated attempt, yielding the response rate of 95.3%.

5.1. Sociodemographic Characteristics

As shown in table 1, four hundred and ninety eight (65.3%) of the respondents were drawn from the rural kebeles while the remaining 34.7% were from urban kebeles. The majority (58.2%) were females and the rest were males. All members of the study populations were Amhara by ethnicity and the vast majority (97.2%) were Orthodox Christians by religion. Five hundred sixty six (74.8%) were in the age groups of 15 t 19 years and 520 (68.2%) were never married. Two hundred seventy eight (34.6%) were living with both parents while 106 (13.9%) were from single parent families. Among those who were living with their parents 193 (50.3%) were from perceived poor family economic status and the vast majority (84.6%) have never received any pocket money from their families.

The majority (77.3%) of the participants had illiterate mothers. Similarly most (68.9%) of adolescents' fathers were illiterate. The majority of respondents had only one of their parents going out for paid work as a civil servant.

Two hundred forty four (32.0%) of the respondents work outside the home for money, with majority (75%) earning less than Birr 70.00 per month.

Alcohol consumption in the area is high, with 66.5% of respondents reporting alcohol consumption either some or daily. By contrast, only about 2.9% and 2.5% of respondents report similar consumption of chat and cigarette.

Table 1: Socio demographic characteristics of out-of-school adolescents by place of residence, South Gondar, February 2003.

VARIABLES	RURAL (n = 498)		URBAN (n =265)		TOTAL (n =763)	
	N	%	n	%	n	%
Sex						
Male	209	42.0	110	41.5	319	41.8
Female	289	58.0	155	58.5	444	58.2
Age						
10-14	165	33.1	32	12.1	197	25.8
15-19	333	66.9	233	87.9	566	74.2

Religion						
Orthodox	497	99.8	245	92.5	742	97.2
Others	1	0.2	20	7.5	21	2.8
Ethnic group						
Amhara	498	100.0	265	99.2	763	100.0
Marital status						
Never married	303	60.8	217	81.9	520	68.2
Currently married	180	36.1	35	13.2	215	28.2
Divorced/separated/widowed	15	3.1	13	4.9	28	3.7
Educational level						
Illiterate	275	55.2	39	14.1	314	41.2
Read and write	59	11.8	33	12.5	92	12.1
Primary	122	24.5	40	15.1	162	21.2
Secondary	42	8.4	153	57.7	195	25.6
Occupation						
Daily laborer	22	4.4	20	7.5	42	5.5
Private employee	15	3.0	46	17.4	61	8.0
Others	88	17.7	52	19.6	140	18.3
Nothing	373	74.9	147	55.5	520	68.2
Monthly income (in Birr) (n=219)						
≤15	34	30.9	17	15.6	51	23.3
16 -29	23	20.9	28	25.7	51	23.3
30-69	27	24.5	34	31.2	61	27.9
≥70	26	23.6	30	27.5	56	25.6
Perceived family economic status (n=384)						
Poor	139	55.2	54	40.9	193	50.3
Medium	99	39.3	73	55.3	172	44.8
Rich	14	5.6	05	3.8	19	4.9
Living most of the time with						
Both parents	192	38.4	87	32,8	279	36.6
Single parent family	61	12.2	45	17.0	106	13.9
Husband or wife	165	33.1	33	12.5	198	26.0
Others	81	16.3	100	37.7	181	23.7

5.2. Sexual history of survey respondents

Sexual history of respondents is presented in table 2. Out of all respondents 325 (42.6%) were sexually active. Almost one-third of the sexually active respondents (104) were never married. Among urban adolescents 116 (43.8%) had experienced sexual intercourse while 209(42.0%) of rural adolescents reported to be sexually active. Over all, the proportion of sexually active female adolescents was significantly much higher 251(56.5%) than that of males 74 (23.2%).

For urban male adolescents the median age at first sexual intercourse was 16.00 (mean= 16.1± 1.583) and the median age at first sexual intercourse for urban females was 15.00 (mean=14.987± 1.916). On the other hand, the median age at first sexual intercourse for rural male and female adolescents was 17.00 (mean= 16.1±366) and 14.00 (mean=13.721± 1.734), respectively. Of those sexually active, 169 (80.9%) rural and 41 (35.3%) urban respondents had their first sexual experience when they got married. According to urban adolescents the other main reasons given for first sexual encounter include sexual desire 12 (10.3%), to obtain gifts 8 (6.9%) and romantic love 42 (36.2%). For rural adolescents the main reasons given for first sexual encounter included sexual desire 17 (8.9.3%), rape 12 (5.7%) and romantic love 50 (15.4%). Alcohol was cited as a predominant driving force by 7% of male respondents. Of those who are sexually active 37 (32.7%) rural and 38 (18.2%) urban adolescents reported that they had sexual intercourse with two or more partners. The mean number of sexual partners for urban adolescents is 1.629± 1.138SD (median=1.00) and that of rural adolescents is 1.292 ± 0.704 SD (median=1.00). Out of those sexually active respondents, a total of 19 (25.7%) male adolescents reported experiencing commercial sex in the past 12 months. The proportion was higher (33.3%) for urban than (18.6%) rural adolescents. Although 36% of them reported occasional condom use, none of the 19 adolescents reported consistent condom use during commercial sex. About 7.8% of the sexually active urban and 3.35% of the sexually active rural adolescents reported history of signs and /or symptoms of STIs. The proportion of reported STIs was higher in males (9.5%) than in females (3.6%). Of those sexually active females, 69.1% of rural and 41.2% of urban adolescents have got pregnant at least once prior to this study, out of which 1.8% of rural and 17.1% of urban adolescents reported history of induced abortion at least once.

Generally history of ever sex, sex with female commercial sex worker, proportion of STIs, risk perception to contract HIV, and condom use during last intercourse did not show statistically significant difference ($p > 0.05$) between urban and rural adolescents. Where as, ever use of modern contraceptives, and rate of abortion were significantly high ($p < 0.05$) in urban adolescents than rural and history of ever pregnancy was significantly higher in rural adolescents than urban.

Reason for first sexual encounter among out-of-school adolescents by sex, South Gondar, February 2003.

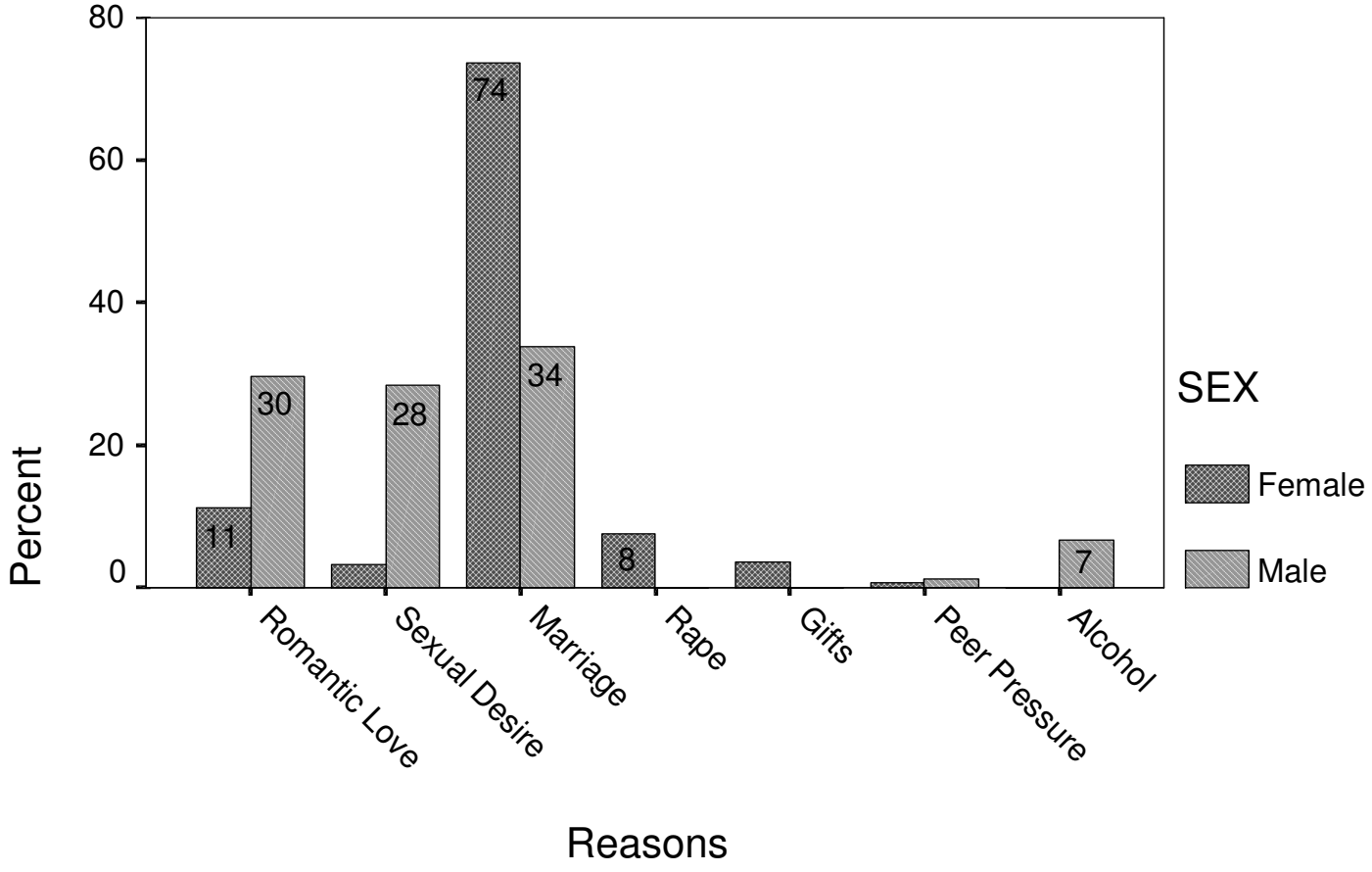


Table2 : Comparison of sexual and reproductive health behaviors and practices of out-of-school adolescents by place of residence, South Gondar, February 2003.

VARIABLES	Rural (n=498) N	%	Urban (n=265) n	%	X^2 (P-value)
Ever had sexual intercourse (n=763)					
Yes	**209**	**(42.0)**	**116**	**(43.8)**	**0.16(> 0.05)**
No	**289**	**(58.0)**	**149**	**(56.2)**	
Life time number of sexual partner (N=322)					
One	**171**	**(81.8)**	**76**	**(67.3)**	**7.91 (< 0.05)***
>Two	**38**	**(18.2)**	**37**	**(32.7)**	
Ever used modern contraceptives (n=250)					
Yes	**54**	**(32.7)**	**55**	**(64.7)**	**22.05(< 0.05)***
No	**111**	**(67.3)**	**30**	**(35.3)**	
Had ever been pregnant (n=250)					
Yes	**114**	**(69.1)**	**35**	**(41.2)**	**17.01(< 0.05)***
No	**51**	**(30.9)**	**50**	**(58.8)**	
Risk perception to contract HIV/AIDS (n=325)					
Yes	**11**	**(5.3)**	**13**	**(11.2)**	**3.03(<0.05)**
No	**198**	**(94.7)**	**103**	**(88.8)**	
Sex with female commercial sex workers (N=77)					
Yes	**8**	**(18.6)**	**11**	**(32.4)**	**1.26(> 0.05)**
No	**35**	**(81.4)**	**23**	**(67.6)**	
Condom use during last sexual Intercourse with FCSW (n=31)					
Yes	**7**	**(70.0)**	**12**	**(57.1)**	**0.09(>0.05)**
No	**3**	**(30.0)**	**9**	**(42.9)**	
Ever had STIs (n=325)					
Yes	**7**	**3.3**	**9**	**(7.8)**	**2.22(>0.05)**
No	**202**	**96.2**	**107**	**(92.2)**	
Ever abort (149)					
Yes	**2**	**1.8**	**6**	**(17.1)**	**9.64(< 0.05)***
No	**112**	**96.7**	**29**	**(82.9)**	

* = Significant

5.3. Knowledge about and Attitude toward Reproductive and Sexual Health

Out of all study subjects only 41(8.0%) rural and 65(24.5%) urban adolescents responded that a woman is most likely to become pregnant halfway between two periods. Over all more urban adolescents (79.6%) appear to know at least one modern contraceptive than rural adolescents (56.2%). Oral contraceptive pills were the most frequently cited contraception Known by 189(71.3%)of urban and 254 (51.0%) of rural adolescents. One hundred fifty six (58.9%) and 109(41.1%)of urban adolescents mentioned injectables and condom as second and third familiar methods, respectively. On the other hand, only (7.4%) and 15(3.0%) of rural adolescents mentioned condom and injectables as a second and third familiar methods, respectively.

The majority (94.1%) of the study populations were aware of HIV AIDS. The proportion of those who have never heard about the epidemic is higher in rural 41 (9.1%) than in urban 4 (1.5%) adolescents. However, only 343 (45.0%) of the respondents recognized diseases other than HIV/AIDS that can be transmitted through sexual intercourse of which 184 (69.4%) were urban and 159 (31.9%) were rural participants respectively. Among respondents who know diseases that can be transmitted through sexual intercourse other than AIDS, 316(92.1%), 311(90.7%), 115 (33.5%), and 92 (26.9%) mentioned gonorrhea, syphilis, lymphogranulom venereum, and chancroid, respectively. Moreover, only 33 (8.3%) of rural and 75 (28.3%) of urban adolescents mentioned all the three possible methods of HIV-STIs prevention (abstinence, be faithful to one sexual partner, and condom use). Out of 645 participants who mentioned at least one means of preventing STDs and AIDS, 517 (67.8%) mentioned abstaining, 305 (40.1%) remaining faithful to sex partner, 234 (30.7%) using condom, and 89 (11.7) avoiding sex with female commercial sex workers (FCSW). Only 46% of the participants agreed that a girl could

get pregnant the first time she had Sex. Slightly more than half (53%) of them mentioned that a healthy looking person could have HIV.

Generally, there was statistically significant difference ($p<0.05$) between the urban and rural groups in terms of their Knowledge about basic human reproduction and HIV/STIs, their attitude towards condom use, and their self-risk perception of acquiring HIV (table 3).

Radio (44.4%), family members / parents (44.7%), news letters/pamphlets (19.1%), peers (18.9%), heath workers (16.8%) and religious leaders (14.0%) were mentioned as common sources of information for HIV/AIDS. However, only 33.4% of adolescents reported that they had source of information about sexual and development changes during adolescence. The most frequently reported source of information for changes that occur during adolescence was the school and only 21.2 % of the adolescents mentioned their parents as their source.

Table 3: Reproductive health knowledge and attitude of out-of-school adolescents by places of residence South Gondar February 2003

Variables	Place of residence				
	Rural		Urban		
	No (%)		No (%)		X^2(p-value)
Knowledge of the fertile days in woman's menstrual cycle					
Correct	41	(8.2)	65	(24.5)	37.4 (< 0.05)*
Incorrect	457	(91.8)	200	(75.5)	
Know means of avoiding pregnancy					
Yes	280	(56.2)	211	(79.6)	40.26 (< 0.05)*
No	218	(43.8)	54	(20.4)	
Know diseases that can be transmitted through sexual intercourse					
Knowledgeable	159	(31.9)	184	(69.4)	96.82 (< 0.05)*
Not Knowledgeable	339	(68.1)	81	(30.6)	
Know means of STD and HIV/AIDS prevention					
Yes	33	(6.6)	75	(28.3)	65.1 (< 0.05)*
No	465	(93.4)	190	(71.7)	
Have heard about HIV/AIDS					
Yes	457	(91.8)	261	(98.5)	12.9 (< 0.05)*
No	41	(8.2)	4	(1.5)	
Using condom is a sign of not trusting your partner					
Disagree	141	(28.3)	108	(40.8)	11.62 (< 0.05)*.
Agree /not sure	357	(71.7)	157	(59.2)	
A boy should have sex before he gets married					
Disagree	382	(76.7)	210	(79.2)	0.503(>0.05)
Agree /not sure	116	(23.3)	55	(20.8)	
Discussing condom or contraceptive with young people promotes promiscuity					
Disagree	204	(68.5)	188	(70.9)	61.03 (< 0.05)*
Agree /not sure	294	(31.5)	77	(29.1)	
Believe that they have done something that put at risk of getting AIDS.					
Ye	12	(2.4)	16	(6.0)	5.45 (< 0.05)*
No	486	(97.6)	249	(94.0)	

NB *=significant

5.4. Condom Use

Only 12.3% of the sexually active adolescents reported ever condom use. Condom use was associated with marital status, educational status, and reported number of sexual partners. Those who were currently married use condom lees frequently than those who were not [OR=0.184(0.059,0.573)], those with primary education [OR= 0.108 (0.026, 0.447)] and those who reported a single sexual partner [0.112(0.044, 0.285)] also use condom less frequently than those who had secondary education and those who had two or more sex partners, respectively. The result is presented in table 4.

Table 4: Comparison of condom use by selected variables. South Gondar, February 2003

VARIABLES	Condom use		OR (95% CI)	
	Yes	No	Crude	Adjusted
Place of residence				
Urban	28 (24.1)	88(75.9)	5.22(2.43, 11.76)	1.112(0.375, 3.302)
Rural	12(5.7)	197 (94.3)	1	1
Sex				
Female	23(9.2)	228(90.8)	0.34(.16, 0.76)	0.635(0.255, 1.581)
Male	17(23.0)	57(77.0)	1	1
Age				
10-17	11(11.00)	89(89.00)	0.84(0.36, 1.82)	0.966(0.347, 2.692)
18-19	29(12.9)	196(87.1)	1	1
Marital status				
Currently married	5(2.6)	189(97.4)	0.07(0.02, 0.20)	0.184(0.059, 0.573)*
Currently not married	35(26.7)	96(73.3)	1	1
Number of sexual partners				
One	12(4.9)	235(95.1)	0.10(0.04, 0.22)	0.112(0.044, 0.289)*
≥ Two	26(44.0)	49(56.0)	1	
Educational level				
Illiterate	6(4.6)	125(95.4)	0.11(0.04, 0.29)	0.350 (0.093, 1.322)
Primary	5(5.1)	94(94.9)	0.12.(0.04, 0.34)	0.108(0.026, 0.447)*
Secondary	29(30.5)	66(69.5)	1	1
Risk Perception				
Yes	9(37.5)	15(42.5)	5.23(1.84, 13.93)	1.365(0.405, 4.597)
No	31(10.3)	270(89.7)	1	1
Knowledge of HIV prevention				
Knowledgeable	17(34.0)	33(66.0)	5.64(2.53, 12.29)	2.268 (0.865, 5.946)
Not Knowledgeable	23(8.4)	252(91.6)	1	1
Alcohol				
Yes	30(11.4)	233(88.6)	0.67(0.30, 1.64)	0.531(0.194, 1.459)
No	10(16.1)	52(83.9)	1	

NB *= significant

5.5. Risk Perception

Participants' attitude towards perceiving themselves as susceptible to HIV infection was asked and the result indicated that only 12 (2.4%) of the rural and 16 (6.0%) of the urban adolescents were aware of being engaged in high-risk sexual practices. Among those who perceived themselves at risk, 64% reported no condom use, 25% reported multi-sexual partner, and 21.1% reported sex with female commercial sex workers. The most frequently (52%) cited reason, by those who did not perceive themselves at risk, was that they did not have any sexual contact, followed by being faithful to one sex partner (25.5%). A number of factors including place of residence, marital status, educational status- and total number of sexual partners have shown significant association with self-risk perception (table 5).

Table 5: comparison of selected sociodemographic and sexual behavior of out-of-school adolescents by risk perception, South Gondar, February 2003.

VARIABLES	Risk perception		OR (95% CI)	
	Yes	No	Crude	Adjusted
Place of residence				
Urban	16(6.0)	249(94.0)	2.60(1.13, 6.12)	3.577(1.028, 12.449)
Rural	12(2.4)	486(97.6)	1	1
Sex				
Female	13(2.9)	431(97.1)	1	1
Male	15(4.7)	304(95.3)	1.64(0.71, 3.79)	1.635(0.587, 4.559)
Age				
10-17	7(1.6)	426(98.4)	1	1
15-19	21(6.4)	309(93.6)	4.14(1.66, 11.64)	1.110(0.340, 3.626)
Marital status				
Currently married	4(1.9)	211(98.1)	1	1
Currently not married	24(4.4)	524(95.6))	2.42.(0.82, 9.69)	5.071(1.307,19.677)*
Educational level				
Illiterate	3(1.0)	311(99.0)	1	1
Primary	3(1.2)	251(98.8)	1.24(0.16, 9.33)	0.678(0.102, 4.523)
Secondary	22(11.9)	173(88.1)	13.86(3.86, 69.45)	9.721(1.903, 45.176)
Number of sexual partners				
One	8(3.2)	239(94.8)	1	1
≥ Two	16(21.3)	59(78.7)	8.10(3.07, 22.27)	5.517(1.889, 16.110)
Agree to VCT				
Yes	16(4.3)	360(95.7)	1.39(0.61, 3.26)	1.424(0.475, 4.226)
No	12(3.1)	375((96.9)	1	1
Knowledge of HIV prevention				
Knowledgeable	9(8.3)	99(91.7)	3.04(1.18,7.28)	1.240(0.402, 3.308)
Not Knowledgeable	19(2.9)	636(97.1)	1	1
Alcohol				
Yes	22(4.3)	493(95.7)	1.80(0.70, 5.94)	1.296(0.390, 4.308)
No	6(2.4)	242(97.6)	1	1

5.6. Willingness to Voluntary Counseling and Testing (VCT)

The majority (68.7%) of the urban, and about 39% of the rural adolescents expressed their willingness to undergo VCT for HIV if the service is made readily available in the area. Sex of respondents and lifetime number of sexual partners were significantly associated with willingness to VCT. Males were almost three times more willing [OR=2,912(1.591, 5.322)] than females, and those who reported single sexual partner were almost two times more willing [OR=1.869(1.027, 3.402)] than those who reported two or more sexual partner to undergo VCT. The result is presented in table 6.

Table 6: comparison of rural and urban out-of-school to willingness for VCT. South Gondar, February 2003

VARIABLES	Willingness		OR (95%CI)	
	Yes	No	Crude	Adjusted
Place of residence				
Urban	182(68.7)	83(31.3)	3.44(2.48, 4.78)	1.735(0.908, 3.318)
Rural	194(39.0)	304(61.0)	1	1
Sex				
Female	192(43.2)	252(56.8)	1	1
Male	184(57.7)	135(42.3)	1.79(1.39, 2.42)	2.912(1.591, 5.329)*
Age				
10-17	184(42.5)	249(57.5)	1	1
18-19	192(58.2)	138(41.8)	1.88(1.39, 2.54)	1.248(0.741, 2.103)
Marital status				
Currently married	90(41.9)	125(58.1)	1	1
Currently not married	286(52.2)	262(47.8)	1.52(1.09, 2.11)	1.108(0.682, 1.956)
Number of sexual partners				
One	123(49.8)	124(50.2)	1.26(0.73, 2.20)	1.869(1.027, 3.402)*
$\geq$ Two	33(44.0)	42(56.0)	1	1
Educational level				
Illiterate	121(38.5)	193(61.5)	1	1
Primary	116(45.7)	138(54.3)	1.34(0.95, 1.90)	1.441(0.682, 3.044)
Secondary	139(71.3)	56(28.7)	3.96(2.65, 5.93)	1.199(0.677, 2.490)
Risk Perception				
Yes				
No	16(57.1)	12(42.9)	1.39(0.61, 3.26)	1.315(0.503, 3.436)
	360(49.0)	375(51.0)	1	1
Knowledge of HIV prevention				
Knowledgeable	71(65.7)	37(34.3)	2.20(1.41, 3.47)	1.075(0.517, 2.235)
Not Knowledgeable	305(46.6)	350(53.4)	1	1
Alcohol				
Yes	261(50.7)	254(49.3)	1.19(0.87, 1.63)	1.148(0.629, 2.095)
No	115(46.4)	133(53.6)	1	1

Result of Focus Group Discussions

The discussion centered on adolescents' perception on the risks of sexual activities and sexual behavior among their peers. Besides, we tried to obtain information on what motivates adolescents to involve in risky sexual behavior and what stops them from preventing the risks of contracting HIV-STIs and avoiding unwanted pregnancy/ illegal abortion. Finally, the discussion entertained their opinion on what should be done to avert the problem in the area.

Perception of the problem

The participants generally agreed that HIV/AIDS and illegal abortion performed by local abortionists are the common problems of adolescents in the area.

According to female participants, unwanted pregnancy is the causes for the high rate of school dropouts, for migration, and for child abuse in the area. Participants also discussed the cause of unwanted pregnancy, which include forced sex, lack of access to contraceptives, negative attitude to modern contraceptives, and lack of knowledge.

Though most participants admitted that it is very difficult to assess the real prevalence of HIV/AIDS in the area due to the associated stigma, they based their estimation on the increasing death rate particularly affecting the youth. The fact that his/her partner and /or their children follow the death of one is another justification, according to most of the participants. They also added that "Yesamba Beshita" (Tuberculosis) is a common cause of death in the area while tuberculosis was generally believed to be a curable communicable disease years ago.

With regard to the magnitude of illegal abortion in the area, the urban females´ group said that, though it is done secretly it is an open agenda among peers adding that local abortionists often do it by inserting plastic tubes into the cervix.

Both the males' and the females' groups agreed that the risk of acquiring HIV/AIDS in the area is higher for female adolescents than for male. According to the urban female participants, the high rate of illegal abortion often done by inserting plastic tubes or sharps through the cervix is one major factor contributing for the spread of HIV among their peers.

The main reason why females go to local abortionists is attributed to lack of safe abortion services, financial problem to go to Bahir Dar (the capital of the Amhara Region, located 100Kms from Debretabor) where they believe they can get safe abortion service (for those who can afford), and stigma associated with premarital sex.

Both groups agreed that the community never admitted premarital sex while premarital sex is a common practice in the area among adolescents.

Sexual Behavior

Both groups admitted that unprotected sexual intercourse is the main cause of the spread of HIV/AIDS in the area. They generally agreed that sexual activity is common among their peers. The vast majority of both groups agreed that adolescents in their community begin sexual intercourse at an early age. The most commonly stated age for sexual debut for females is 12 to 15 years while it is 15 to 16 years for males. According to the urban females´ groups, almost all

adolescents in the area have more than one sexual partner, some having up to seven or more. Both groups stated that sex with multiple partners and sex out side of marriage are also common practices in the area.

Some of the participants pointed out some of the common reasons for higher degree of sexual activity in the area including the perception that adolescents could not control their emotion, and a girl should start sexual intercourse once she realized the manifestation of her first menstruation. One male participant said that once her first menstruation occurred, a girl could no longer control her interest and she would do it right at that time.

The increasing rate of joblessness in the area is another major factor stated repeatedly by all participants for the high rate of sexual activity. One female participant explained that when a girl says okay to have intercourse with a man to obtain money, she knows that the man is giving her both money and HIV, but getting money is the priority in such situations. Others pointed out that this is particularly true for young adolescents who are attracted by fashions.

When young people are jobless they often spend their time drinking Tella (locally made alcohol), and chewing Chat is on the rise in the urban area (Debretabor), both associated with increased sexual behavior, said some of the participants.

Barrier to safer sex

Given the environment in which the participants live, motivating factors for engaging in sexual practice seem to be localized for urban and rural adolescents. Both rural and urban adolescents know that HIV could be prevented, but it was evident from the discussion that there are so many barriers that prevent adolescents from adopting safer sex.

Faithfulness to one partner

In the rural area where there is often a wider age difference between married couples, the young woman who is not matured both physically and mentally will not be able to satisfy her partner's sexual desire. At the same time she is not able to manage her home. As a result of this, the husband will be attracted by another matured woman and continue going out as explained by most of rural adolescents. The local expression "men and dogs are attracted by food" is an indicative of such behaviors of males in the area, said one female participant

Abstinence

Abstinence as a method of avoiding the risks of both HIV/AIDS and unwanted pregnancy is not a reliable method in the area, in particular for urban adolescents, for many contextual reasons. Some of the main reasons as discussed include, changes that come with urbanization such as delayed age of marriage, peer pressure, and the perception that adolescents could no longer control the force of nature. However, discussion with the rural male adolescents indicated their confidence to delay sex until marriage.

Sexual exploitation of both rural and urban female adolescents in the area was another factor identified by both females' and males' groups as one of the major factors for unacceptability of preventive measures. Female adolescents who could no longer marry due to lack of dowry migrate to urban areas and engage in prostitution. According to urban female adolescents, job opportunity and material resources are a means by which many office personnel attract them. Some male adolescents in the urban groups also mentioned using sex as a means of obtaining material resources.

Most of the rural villages are extremely far from junior secondary or high schools. Therefore, the possibility of continuing beyond grade 4 is very rare for most of female adolescents in the rural area. Those who decided to continue beyond grade 4 or 6 will be raped on the way to school or back home. For those whose house is very far, and who decided to stay the weekdays in towns, the risk of forced sex, either by their friends or by strangers while they live in Towns, is higher, said the participants.

Condom

The participants in general, particularly the urban adolescents, have heard of condom and know where it is found, but lack of appropriate knowledge and associated wrong perceptions and rumors are barriers pointed out in all groups. Both groups did not consider the use of condom as acceptable means of prevention by males because of perceived reduction in sexual pleasure. According to the discussion with the urban adolescents, sex with condom is compared to "fasting" food, and sex without condom is compared to "non-fasting" food. By the same

analogy, the price of sex without condom is more expensive than sex with condom in the area. Condoms contain the virus (HIV) to destroy blacks, the government distributes condoms freely to control population growth, and condom use is a sign of infidelity, are common misperceptions pointed out for not using condom.

Neither the urban nor the rural adolescents feel comfortable to buy condom from shops or to collect it from health institutions. It worries them that they are required to provide personal information such as full name and address at health institutions. According to one participant, some times health workers ask for identity cards of clients who visit their health institute to collect condoms. For this reason, many clients refrain from going to health institutions. Stigma associated with premarital sex is another reason that limits condom use in the area.

Both rural and urban adolescents believe that though their parents are aware of the risk of HIV most of them neither have accurate knowledge nor the culture to discuss sexuality openly. Adding that parents simply give them a sort of threatening warnings without any explanation.

6. DISCUSSION

In Ethiopia, information on adolescent sexuality in general, and on that of rural out-of-school adolescents in particular, is very rare. This study has assessed the perception of risks of sexual activities among out-of-school adolescents who live in one of the remote part of the country. The study has also assessed and identified some of the socio-economic and cultural factors that influence the sexual behavior and practices of these adolescents.

The study shows that more than 90% of the rural and urban adolescents are aware that unprotected sex can expose to HIV/AIDS, and about 45% of them understand the risks of acquiring other STIs. It is also found out that HIV/AIDS and illegal abortion performed by local abortionists are the common problem of adolescents in the area. Although, most of the respondents did not name all the three preventive methods, about 68%, 40% and 31% of the respondents said that one could avoid HIV by abstaining, by being faithful to a single partner and by using condom, respectively. Besides, 64.4% of participants know at least one method of modern contraceptive. However, the practices of preventive methods among adolescents were generally very low despite their significant involvement in high-risk sexual practices. The findings generally suggest that the sexual behavior of out-of-school adolescents in the study area is highly influenced by socio-economic and cultural factors than by their Knowledge.

Lack of parental support or oversight, and forced idleness places young people at considerable risks of unwanted pregnancy, unsafe abortion, and STDs including HIV (18). About 41% and 47% of the respondents were illiterate and school dropouts respectively. Most subjects (68.2%) were jobless, the vast majority (84.6%) of adolescents who were living with their parents never

receive (any kind) of pocket money, and 75 % of those who reported having some sort of job for their living were paid less than Birr 75.00 (app.8.50 USD) per month. Both the qualitative and quantitative data indicated that, early marriage, forced sex, peer pressure, practice of sex at earlier age for economic reasons, disapproval of adolescence sexuality, lack of convenient services, and negative attitude to modern contraceptives are some of the important factors that molded their sexual practices. These facts clearly indicate the influence of social and economic factors that affect the sexual life of adolescents in the study area.

In this study about 43.8% of urban and 42.0% of rural adolescents have reported that they are sexually active. This finding is much higher compared to the result of studies among school adolescents in Ethiopia (6, 12, 14, 17). On the other hand, our finding is relatively low when compared to similar studies conducted in the country that targeted urban out-of-school youths (6-8). But similar finding was reported by a recent study that compared the reproductive health needs of rural and urban out-of-school adolescents in the northern part of the country (5). Urbanization and being out-of-school stimulates premarital sex, while early marriage is common in rural areas. Therefore, the difference between these two findings could be attributed to differences in the study settings as well as to compositions of subjects in terms of their marital status. The mean age at first sexual intercourse in this study was 14.67. This is relatively low compared to several previous studies in Ethiopia in which it ranges from 15 to 17.2 years (5 - 8, 17). But this one is relatively high when compared to the recent study report that assessed the reproductive health needs of rural and urban adolescents in the north part of the country (5). The relatively low mean age at first sexual intercourse is attributed to the involvement of rural adolescents who reported early marriage. In several previous studies the proportion of sexually

active males was persistently higher, ranging from 49.2% to 83.8% compared to that of females, 13.5% to 47.8% (14, 6,7,10,13). Opposed to this fact, the proportion of sexually active female adolescents in our study was much higher (56.5%) than sexually active males adolescents (23.3%). Alemayehu also reported almost similar finding (5). All these can be attributable to rural youths' earlier involvement in adult behaviors and societal attitudes towards early marriage, which is a common practice in most Sub- Saharan African countries including Ethiopia (35, 57). The finding of our study can also prove these facts, in which the proportion of married rural female adolescents was by far greater (49.8%) than the male groups (14.8%). The practice of sex at earlier age for economic reasons, and forced sex that was significantly reported by female respondents of this study, is another possible explanation. The focus group participants of this study also emphasized the existence of these problems in the study area.

The existence of risky sexual practice including premarital sex, unprotected sex with none marital partners, and sex with female commercial sex workers are reported by both urban and rural adolescents. Reports in previous studies in Ethiopia indicate that the prevalence of multi - sexual partner among youth/adolescents ranges from 25% to 60.2% (5, 6). Although vast majority of sexually active rural (81.8%) and (67.3%) urban adolescents reported that they are limited to one sexual partner, still considerable proportions of urban (32.9%) and rural (18.2%) adolescents have reported to have two or more sexual partners. The mean number of sexual partner for urban adolescent is still found high (1.63$\pm$ 1.14) compared to that of the rural groups (1.29 $\pm$ 0.70). On the other hand, the mean number of reported sexual partners in our study is relatively low compared to other out-of-school youth in Ethiopia (7, 43). Among sexually active male adolescents, 27% reported experiencing commercial sex in the previous 12 months, which

is much higher than in previous studies. About 16.3% of out-of-school youth in Addis Ababa and about 8% of sexually active school adolescents in Gondar and Harar have reported experiencing commercial sex (6, 12, 16). The proportion of reported exposure to commercial sex in our study is very high (34.4%) for urban male adolescents compared to the rural ones (19.0%).

A recent survey in Afar region reported that consistent condom use during experiencing commercial sex among out-of-school youth was only 58 % (60). The alarming finding of this study is that only 36% of those who reported experiencing commercial sex used condom just occasionally and none of them reported consistent condom use.

Studies conducted in some parts of the country among out-of-school youths revealed that the prevalence of self reported STDs were 6.5 %, 4% and 6% in Bahirdar, Awasa, and Addis Ababa respectively (7, 8, 12). In our study self repotted signs (symptoms) of STIs among sexually active youth was 4.9%, which is almost similar. However, the actual number may be higher, as people may not be so open in discussing such issues because of related stigma. The symptoms of STDs are more easily identified in males than in females (41). Therefore, this might also have made the over all reported figure lower, as the proportion of females who reported STDs in this study is much higher than males (3.6% vs. 9.5%). Half of those who reported history of STDs first consulted peers and a considerable proportion (44%) got treatment either from local injectors or from private pharmacy, while they could have been better treated in fair cost in government health institutes. Effectiveness of the treatment and obtaining confidential service were the two main concerns for preferring the visited service areas. Peers may not have accurate

knowledge about STDs; however, the observed peer consultation can encourage interventions that consider peer involvement as a strategy to disseminate accurate information in such sensitive and personal issues. Peer education was found to be effective in working with out-of-school adolescents (42).

Considering girls' sexual behavior, the study result indicated that a substantial proportion of both rural and urban female adolescents are practicing unprotected sex. Almost 70% of the sexually active rural and more than 40% of the sexually active urban adolescents have reported that they got pregnant at least once prior to this study, out of which 1.8% of rural and 17.1% of urban adolescents reported history of induced abortion at least once. In counties where safe abortion services are not legal, teenagers especially are likely to undergo unsafe and dangerous abortion, as they often lack money to pay for skilled practinnore (42). This was also true for subjects this study. In this study, only one out of the total of 8 reported abortions was induced by a health professional, while untrained local abortionists induced the majority (88.2%) of cases, under hazardous conditions. The information obtained from the focus group discussion also revealed the same fact. Almost all participants in the focus group pointed out that unwanted pregnancy and illegal abortions are common in the area. Compared to some of the previous reports, the occurrence of early pregnancy and early childbirth is very high in this area (5,6,12,16,43).

Ever use of modern contraceptives among sexually active female adolescents in this study was high (43.6%) compared to some of the previous reports that range between 22% and 30%. However, there was great discrepancy between their knowledge and practice (86.7% vs. 43.6%).

G. Silassie also reported similar pattern of discrepancy between knowledge and practice of modern contraceptive use (14).

Several studies in the Sub-Saharan Africa had reported that sexually active unmarried adolescents are more likely than are married adolescents to depend on modern contraception (14, 42,). The same fact is observed in our study, since 58.6% of the single adolescents had reported having used modern contraceptive as compared to only 35.6% of the currently married ones. This may be due to the fact that married adolescents in most developing countries, particularly in rural areas, are not expected to use contraceptives but to bear a child as immediately as possible (13, 42). Additionally, absence of adolescent friendly services, lack of knowledge, and negative attitude to modern contraception are some of the possible barriers for low utilization of the available services as commented by FGD.

Young people know very little about reproductive health and their own biology and are often victims of their own misconception about the risks and dangers of unsafe sexual relations (22). This study has also revealed the same fact. Only 13.9% of the rural and 24.5% of the urban study subjects, correctly identified a woman is most likely to become pregnant half way between two periods, which is lower than findings from Harar and Addis Ababa (6, 13). However, when only female adolescents are considered, the result is relatively higher than that of Demographic and Health Survey (DHS) of Ethiopia (27). In our study 17.8% of female adolescents correctly replied to this question compared to 12.2% of all women of participants DHS. The majority (94.1%) of the study population reported being aware of HIV AIDS. The proportion of those who have never heard about the epidemic is higher in rural 41 (9.1%) than

in urban 4(1.5%) adolescents. This finding is similar to most of recent findings in the country. However, only 33 (8.3%) of rural and 75 (28.3%) of urban adolescents mentioned all the three possible methods of HIV-STIs prevention (abstinence, being faithful to one sexual partner, and condom use). Additionally, only 343 (45.0%) of the respondents were aware of diseases other than HIV/AIDS that can be transmitted through sexual intercourse. Thus, there is a big gap between level of awareness, and knowledge of prevention methods as well as the link between HIV and other STIs.

Out of 645 (80%) participants who mentioned at least one means of preventing HIV/AIDS, 67.8% and 40.1% of respondents said one could avoid the infection by abstaining and remaining faithful to sex partner respectively, while only 234 (30.7%) mentioned condom use. The discussion with the rural male adolescents also indicated their confidence to delay sex until marriage. However, in a society where sex is not talked openly, considering faithfulness and abstinence superior to condom use could be very difficult since these methods require more communication / negotiation skills and more discipline than condom use. Moreover, changes that come with urbanization such as delayed age of marriage, peer pressure, and the perception that adolescents could no longer control the force of nature would make abstinence very difficult as already pointed out by urban focus group participants. Similar to most of the previous findings, radio was mentioned as the most common source of information on HIV/AIDS (5, 6, 8, 14, 16, 43-). Considerable proportion of respondents in this study also mentioned the family/parents as important source of information on HIV/AIDS. However, participants in the focus group seriously commented that the information obtained from parents

is not based on scientific knowledge; rather it is a sort of threat that does not give any solution to the problem.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1. Strength of the Study

This study has tried to compare the level of risk perception between rural and urban out-of-school adolescents and identify some of the barriers for safe sex practice among this vulnerable group. Including very remote rural Kebeles and applying a random sampling technique at all level to have a representative sample of the source population is on of the major strength of our study. Moreover, the use of combining quantitative and qualitative data has helped us to collect more information that provides insight into the complex pattern of sexual behavior and motivations of out-of-school adolescents.

7.2. Limitation

Since our study deals with a very personal and sensitive issue-sexual behavior, obtaining an honest response among adolescents, especially the unmarried ones in such face-to-face interview is difficult. Hence, some sort of desirability bias may not be eliminated, even if we have tried our best to minimize it.

8. CONCLUSIONS

Understanding the sexual experience and perception of adolescents about the risks associated with sexual activities must be the fundamental element of interventions that are working in the area of HIV/AIDS and unwanted pregnancy.

More than 90% of adolescents in this study were aware of HIV/AIDS. The result of the focus group discussions indicated that out-of-school adolescents in the study area are able to identify the risks associated with unprotected sex. However out-of-school adolescents in the study area generally start sexual intercourse very early and are involved with high-risk sexual practices, including multi-sexual partner and sex with female commercial sex workers. Additionally, a remarkable number of sexually active adolescents had a history of sexually transmitted diseases and vast majority are practicing unprotected sex. In spite of these facts, majority of both rural and urban adolescents had a low individual risk perception.

While it is true that sex is not talked about openly in the community and access to accurate information is denied to both rural and urban adolescents in the area, the major problem that influence sexual behavior of the study subjects are still linked to their socioeconomic and cultural environment. Absence of social support being the major reason, limited access to social services like education and health, and lack of job (forced idleness) lack of support from family, internal migration, cultural factors like early marriage and teen age pregnancy are some of the major environmental factors that push the study population to exercise unsafe sex even when they are aware of the risks of such activities.

9. RECOMMENDATIONS

1.Assess the means and ways for parents, religious leaders and other community members to enable them to accept adolescents' sexuality and discuss healthy sexual life

2.Desseminate appropriate message that could avert the dependency of female adolescents on the little money they get from sexual act, and massages that could control the increasing alcohol and Chat abuse in the urban area.

3.Increase public awareness towards the relationship between HIV and other STIs and strengthening the STDs programs in government and private institutions with the aim to minimize the chance of HIV during unprotected sex

4.Assess the problem and take possible measures to enable the existing health institution to provide adolescent friendly sexual and reproductive health service including voluntary counseling and testing for HIV.

5.Increase access and promote utilization of contraception including condom in the rural community through community based or out-reach reproductive health programs.

10. REFERENCES

1. World Health Organization. The Health of the Young: A Cross-National Survey. Geneva 1996;(69).
2. WHO " Delay Childbearing", Safe Motherhood Newsletter, 98(5), 1998.
3. KANCO "Talking about safer sex" AIDS action. Issue 45, July-September 1999.
4. Friedman LH and Edstron GK. Adolescent Reproductive Health: an approach to planning health services research. WHO, Geneva, 1983.
5. Seifu A. Reproductive Health Needs of Urban and Rural Out-of-School Adolescents In East Gojam: A cross sectional Comparative study (Dissertation) Department of Community Health, Addis Ababa University, 2000.
6. Abate S. Determinants of High-Risk Sexual Behavior for HIV/AIDS among Out-of-School Youth in Addis Ababa, Ethiopia. (Dissertation) Department of Community Health, Faculty of Medicine, Addis Ababa University. December 1999
7. Taffa N. Sexuality of Out-of-School Youth, And Their Knowledge and Attitude About STDs and HIV/ AIDS in Southern Ethiopia. Ethiop. J. Health Dev.1998; 12(1): 17 - 22.
8. Fantahun M and Chala F. Sexual Behavior, and knowledge and attitude twoards HIV/AIDS among out of school youth in Bahar Dar Twon, Northwest Ethiopia. Ethiop. Med. J. 1996; 34(4): 233 - 242.
9. Maartje Versnel, Yemane Berhane, Johannes F. Wendte. Sexuality and Contraception among Never Married High School Students in Butajira, Ethiopia. Ethiop. Med. J. 2002; 40( ): 41-51.
10. Bisrat F., J. Pickering. High School Students` Knowledge, Attitude and Practice of Contraception in Harar Twon, Eastern Ethiopia. Ethiop. Med. J. 1994; 32(2): 151 - 155.

11. Hailu A., Lisanework T., Negeri C., et al. Knowledge, Attitude and Practice on HIV/AIDS among Pupils of Rural High School in Northwestern Ethiopia. Ethiop. J. Health Dev. 1993; 7(2):132.

12. Ismail S, Bitsuamlak H and Alemu K. High Risk Sexual Behaviors for STD/ HIV, Pregnancies and Contraception among High School Students in Rural Twon of Northwest Ethiopia. Ethiop. J. Health Dev. 1997; 11(1): 29 - 36.

13. Kora A, Haile M. Sexual Behavior and Level of Awareness on Reproductive Health among Youths: Evidence from Harar, Eastern Ethiopia. Ethiop. J. Hlth. Dev. 1999; 13(2): 107-113

14. G. Selassie Tesfayi. Determinants of Contraceptive Use among Urban Youth in Ethiopia. Ethiop. J. Hlth. Dev. 1996; 10(2): 97-104

15. Teka T. College Students Attitude and Knowledge of AIDS. Ethiop. med J 1993;31:233-237

16. Eshetu F, David Z, and Kebede D. The Attitude of Students, Parents, and Teachers towards the Promotion of Condoms for Adolescents in Addis Ababa (Dissertation) Department of community health, Faculty of Medicine, Addis Ababa University.

17. Lemma E. Predictors of HIV/AIDS Related Sexual Behavior of High School Adolescents Based on the Classical Health Behavior Models, Jimma Twon, Southwest Ethiopia (Dissertation). Department of Community Health, Addis Ababa University, 2000.

18. An assessment of Reproductive Health Needs in Ethiopia. WWW.WHO.int/reproductive health publications.2003.

19. Hughes J and McCauley AP. Improving the Fit: Adolescents` Needs and Future Programs for Sexual and Reproductive Health in Developing Countries, Studies in Family planning. 1998; 29(2): 233-245.

20. UNAIDS/DFID (2000) Guidelines for Repeated Behavioral Survey in Population at Risk of HIV.

21. WHO Programming for adolescent health and development. Report of WHO/UNFPA/UNICEF study group on health programming for adolescents. Technical report series No. 886. WHO, Geneva, 1999.

22. DSE-Sexual Education and Reproductive Health(2000) Sexual Education and Reproductive Health of Young People in African Countries South of Sahara. Oktoberdruck GmbH, Berlin

23. WHO. Health needs of adolescents. Report of the WHO expert committee. Technical Report Series No. 609. Geneva, 1977.

24. Paxman JM. and Zukerman RJ. Laws and Policies affecting adolescent health. WHO, Geneva, 1989

25. WHO. Programming for adolescent health and development. Report of WHO/UNFPA/UNICEF study group on health programming for adolescents. Technical report series No. 886. WHO, Geneva, 1999.

26. Adjoa Amana. General Overview of Adolescents reproductive health Concepts and Justifications. Proceeding of the XIIth annual conference of the EPHA, 7-9 November 2001. Addis Ababa.

27. Central Statistical Authority (Ethiopia) and ORC Macro .2001.Ethiopian Demographic and Health Survey 2000. Addis Ababa, Ethiopia.

28. WHO. Young people's Health: a challenge for society. Report of WHO study group on young people and health for all by the year 2000. Technical report series No.731. 1986, Geneva.

29. Hofman AM, Greydanus DE. Adolescent Medicine. Second Edition, 1989, USA.

30. Marom RB. and Fiscoff B. Adolescents Decision About Risks: A cognitive perspective. In: Schulenberg J, Magas J. and Hurrelmann K. editors. Health Risks and Developmental Transitions During Adolescence.1997; 110-135. Cambridge University Press.

31. Arthu Elster, Naomi Jkuznets. American Medical Association. Guideline for adolescents Preventive Services: Recommendations and rational. Department of Adolescent Health. Chicago 1994.

32. Ministry of Health, Ethiopia. Technical Guideline in Maternal and Newborn Care. Addis Ababa 1998.

33. Senderowitz J. Adolescent health reassuring the passage to adulthood. World Bank discussion paper, World Bank Washington DC No:279, 1995

34. Regina GM, Mohamed HY, Michael M. et al. Sexual behavior and attitudes among unmarried urban youths in Guinea. International family Planning Perspectives. 1998, 24 (2): 65-

35. Center for Disease Control and Prevention .Adolescent Women and Reproductive Health. In: Family Planning Method and Practice: AFRICA. 2nd ed. Atlanta 1999.

36. Lema, VM and Hassen MA. Knowledge of sexually transmitted diseases, HIV infection and AIDS among active adolescents in Nirobi,Kenya and its relationshipto their sexual behavior and Contraception. East African Medical Jornal 1994;71(2):122-128

37. Anne W.,Lisa J.Difference in HIV spread in four Sub-Saharan cities.UNAIDS Fact Sheet. 1999.)

38. Boyer CB. And Kegeles SM. AIDS Risk and Prevention Among Adolescents. Soc. Sci. Med.1991; 33(1): 11 -23.

39. WHO Young people and sexually transmitted diseases WHO Information fact sheet. No 186 . December 1997 . http: // www. I int/ inf/-fs/en/ fact 186.html

40. UNAIDS. Young People and HIV/AIDS. UNAIDS briefing paper, 2002

41. Ministry of Health, Ethiopia. AIDS in Ethiopia: Background, Projections, Impact and Interventions.2 nd ed. Addis Ababa,1998., Geneva

42. Khama Rogo. Sexual and reproductive health of adolescents in Sub-Saharan Africa In:DSE-Sexual Education and Reproductive Health.(2000), Oktoberdruck GmbH, Berlin, p21

43. Fantahun M, Chala F and Loha M. knowledge, attitude and practice of family planning among senior high school students in north Gondar. Ethiop. Med. J1995; 33(1): 21-29.

44. UNICEF,WHO(1995). A picture of health ? A review and annotated bibliography of the health of theyoung people in developing countries.WHO/FHE/ADH/95. 14

45. Brabin L.,Kemp J., Obunge Orikomaba K., Lkimalo J., Dollimore N., Odu Ngozi N., Hart A.C., Briggs N.D.(1995) REPRODUCTIVE Treact Infection and abortion among adolescents in rural Nigeria. The Lancet: 345, 300-304

46. Ross J. Mauldin W.P., Green S.R. CooK E.R.(1992). Family planning and child survival program as assessed in 1991,New York:The population council

47. Survey of Adolescent Reproductive Health in Ethiopia. National Conference on Adolescents Reproductive Health; 2000 Nov 5-9; Bahir Dar, Etiopia. Packard Foundation

48. kebede S. and Jura C. Wolde. A Survey of Illegal Abortion in Jimma Hospital, South Western Ethiopia. Ethiop. Med. J. 2000 Jan; 38(1): 35-42.

49. Woldemeskel Y. and Chekol A. Induced Abortion and Prevalence of Sexually Transmitted Diseases, and Contraceptive Behavior in Abortion Cases: Gambella Hospital, Southwest Ethiopia. Ethiopian J. Health Sciences. 1999; 9(2): 77-91.

50. Yosef S., Gossa A., Muleta E. A Survey of Illegal Abortion in Five Hospitals of the City of Addis Ababa . AAU, Department of Gynecology and Obstetrics.1993 Dec. (Unpublished).

51. Seifu A. Attitude of health workers twoards adolescent reproductive health service organization in Debremarkos Twon. Residency II (Unpublished). Department of Community Health, Addis Ababa University. June 2001.

52. Crockeff JL. Cultural, historical, and sub cultural contexts of adolescence: Implications for health and development. In: Schulenberg J., Maggs JL. and Hurrelmann K. editors. Health Risks and Developmental Transitions During Adolescence.1997; 23-53. Cambridge University Press.

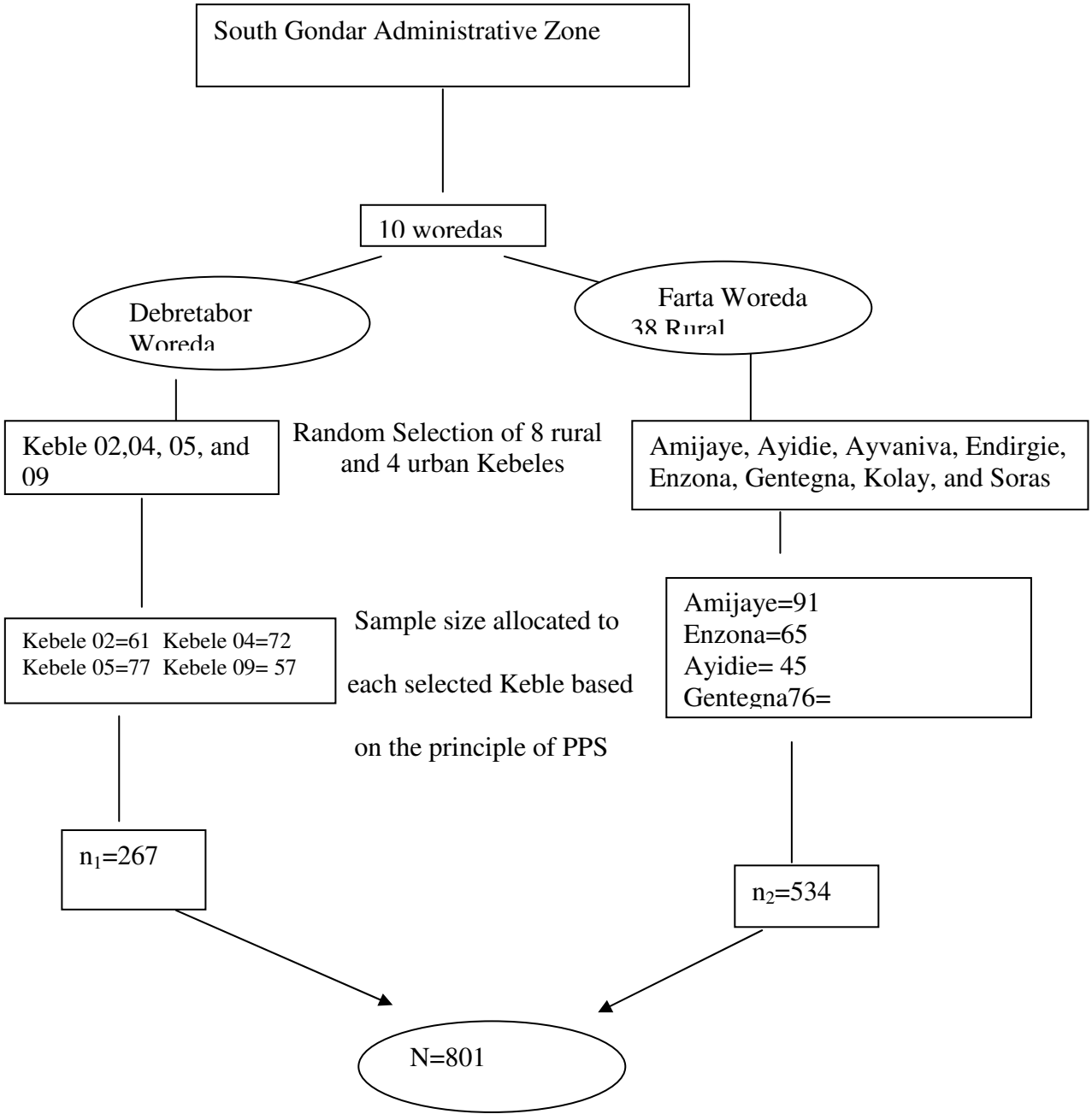
53. FHI. Ethiopian Preliminary Report of Round One National Behavioral and Surveillance Survey, June 2002, Addis Ababa

54. Louse A.,Rachel Cullen, and Symons Wamla Khalokho.Perception of the Risks of Sexual Activity and Their Consequences among Ugandan Adolescents. Studies In Family planning, 2000;31, (1): 35 – 64.

55. South Gondar Zone Health Department. Annual report of the South Gondar Zone Health Department. 2000/2001. Debretabor.

56. Assefa T. Seroprevalence of HIV-1 infection among antenatal care attendees and determinants of high risk sexual behavior among different population subgroups in Afar region. (Dissertation) Department of Community Health, Faculty of Medicine, Addis Ababa University. April 2003

Appendix A: Schematic presentation of the sampling procedure



Appendix B: Sample English Questionnaire

QUESTIONNAIRE ON

Evaluation of Perception of the risks of sexual activities among out-of-School Adolescents

My Name is _____. I came from _____. I am a member of the research team of the Addis Ababa University and the MOH. I would like to inform you that you and me would have a short discussion concerning this study. Before we go to our discussion, I will request you to listen carefully to what I am going to read to you about the purpose and general condition of the study and tell me whether you agree or disagree to participate in this study.

Consent form

The purpose of this study is to assess the perception of the risks of sexual activities among out-of-school adolescents (10-19 years of age) living in this and the neighboring kebeles. Of your peers, you are selected to be one of the participants in the study. The study will be conducted through interviews. We are asking you for a little of your time, about forty five minutes, to help us in this study. In the end, it is hoped that the information you give us could help to design appropriate reproductive health services for adolescents. The interview involves intimate and private life questions. So private setting is needed in which you and the interviewer will carry out the interview. We would like to assure you that this privacy should strictly be maintained throughout. A code number will identify every participant and no name will be used. Your responses to any of the questions will not be given to anyone else and no reports of the study will ever identify you. If a report of results is published, only information about the total group will appear.

The interview is voluntary. Your participation/ non-participation, or refusal to respond to the questions will have no effect now or in the future on services that you or any member of your family may receive from any service providers

Are you willing to participate in this study?

[ ] Yes. [ ] No

Identification

Code No----------

Zone---------- Woreda----------Kebele----------House No.---------Individual

Date of interview ---------date-------month--------year

Name and sig. of interviewer---------- Suprvisor----------

Part One Sociodemograhpic variables			
No	Questions	Alternative Choices for Responses	Code
1	Sex of respondent	1. Male 2. Female	------
2	How old are you?	---------- Years	
3	What is your religion?	1. Orthodox 2. Protestant 3. Catholic 4. Muslim 5. Others, specify ----------	------
4	To witch ethnic group do you belong?	1. Amhara 2..Others, (Specify) ----------	------
5	What is your marital status?	1. Never Married 2.Currently Married 3.Divorced 4. Widowed 5. Separated	------
6	What is your educational status ?	1. Illiterate Skip to Q 8 2. Read and write Skip to Q 8 3.------Last grade or level of education completed	------
7	Why did you stop your education?	1.Economical problem 2.Failure 3.Pregnancy 4. Lack of interest 5.health problem 6.Other (specify)……	

9	What is your father's educational status	1. Illiterate 2. Read and write 3.-------Last grade or level of education completed	-------
10	What is your mother's educational status	1. Illiterate 2. Read and write 3.------Last grade or level of education completed.	-------
11	What is your father's occupation?	1. Farmer 2 Daily laborer 3. Civil Servant 4. Employed in private sector. 5. Has private business mention ---------- 6. Others (specify) ----------	-------
12	What is your mother's occupation?	1.Housewife 2.Daily laborer 3.Maid servant 4. Employed in private sector. 5. Has private business mention 6. Others (specify) ----------	---------
13	In your opinion which of the following shows your families' economic status?	1.Rich 2. Medium 3. Poor 4.very poor	--------
14	Do your parents give you money for your own use?	1.I have never been given any money 2.A few times, but not every month 3.Once a month 4.More than once a month	--------
15	With whom do you live most of the time?	1.With relatives 2 With friends/peers 3. With partner/ husband or wife 4 With boy / girl friend 5. Alone 6. Others specify----------	----------
16	What do you do for your living?	1.Daily laborer 2.Maid servant 3.Employed in private sector. 4.Farmer 5. Nothing	---------

		6. Others (specify)----------	
17	What is your average monthly income ?	--------- Birr	--------
18	Have you ever drunk alcohol like Tella ,Tej, Beer, Areki etc.	1.I have never drunk 2.I have tried alcohol once or twice 3.I drink alcohol from time to time 4.I drink alcohol daily	---------
19	Have you ever smoked cigarettes?	1.I have never smoked 2.I have tried cigarettes once or twice 3.I smoke cigarettes from time to time 4.I smoke cigarettes daily	-------
20	Have you ever chewed khat?	1.I have never chewed 2.I have tried khat once or twice 3.I chew khat from time to time 4.I chew khat daily	-------
Part Two : Concerning Sources of Information			
21	Have you ever had sexual intercourse?	1. Yes 2. No Skip to Q 53	-----
22	At what age did you first have sexual intercourse?(enter number)	1. -------- ---Age in years 2. Don't know/ remember	---------
23	With whom did you make your first sexual intercourse?	1.S/He was a steady boyfriend 2.S/He was a casual boyfriend 3.S/He was a stranger 4.S/He was a family member 5.S/He was my employer 6. Others (specify)_____	--------
24	Why did you decide to have sexual intercourse the first time?	1.fell in love 2 Had desire. 3. I got married 4.Raped 5.To get money and other gifts. 6.Peer pressure 7.was drunk or stoned. 8. Others, specify ----------	--------

25	How older or younger was the person with whom you had your first sexual intercourse?	1.He was an age like mine 2. By more than 10 years older 3.By more than 5 years older 4.By less than 5 years older 5.Younger 6.Do not know	---------
26	How many people in total have you ever had sexual intercourse with?	1. with one person 2. with two people 3. with three people 4. with four people 5.with fife to nine people 6. with ten or more people	--------
27	How many people in total have you ever had sexual intercourse with during the last 12 months?	1. with one person 2. with two people 3. with three people 4. with four people 5.with fife to nine people 6. with ten or more people	
28	Have you ever used a condom?	1.Yes Skip to Q 32 2. No	------
29	How often did you use condom in the last 12 months?	1.always Skip to Q 33 2. most of the time 3. sometime	---------
30	Did you use a condom the FIRST time you had sexual intercourse?	1.Yes 2.No	---------
31	Did you use a condom the LAST time you had sexual intercourse?	1.Yes 2. No	--------

32	If you have not used condom at all, or have not used it consistently what was the reason?	1.Not available 2.Too expensive 3.ashamed to ask my partner 4.Partner objected 5.Used other contraceptive 6.Don't like them 7.wanted to get pregnant 8.Ashamed to buy 9.I trust my partner 10.I was drunk or stoned 11.Didn't think of it 12. I did not Know how to use it 13.It decreases satisfaction/pleasure 14.It bursts 15. My religion prohibits 16.Others (specify)_____	--------
33	(Male only) Have you ever had sexual intercourse with commercial sex workers?	1. Yes 2. No Skip to Q 37	-------
34	Have you ever used a condom when making sexual intercourse with commercial sex workers?	1. Yes 2. No Skip to Q 36	-------
35	If yes, how often did you use condom when making sexual intercourse with commercial sex workers?	1. always Skip to Q 37 2.sometimes 3. most of the time	--------
36	if you have not used condom at all, or have not used it consistently what was the reason	1.Not available 2.Too expensive 3.shamed to ask my partner 4.Partner objected 5.Don't like them 6.shamed to buy 7.I was drunk or stoned 8..Didn't think of it 9. I did not Know how to use it 10.It decreases satisfaction/pleasure 11.It bursts 12.Others (Specify)_____	---------- -

37	Have you ever had symptoms of STI, such as genital ulcer , abnormal genital discharge, pain during urination or genital swelling?	1. Yes 2. No Skip to Q 41	-------
38	If yes, whom did you first discuss the issue with?	1. My partner (husband/ wife) 2. My friends/ peers 3. My parents 4. My boy/girl friend 5 Health workers 6. Traditional healers 7.local injectors 8. Others, specify ----------	------
39	If yes where did you go for treatment?	1. Went to traditional healer 2. Went to public health institution 3. I bought some drug from pharmacy 4.Went to local injectors 5.Went to private clinic 6. Others, specify ----------	------
40	Could you tell me why you prefer to seek health care in this place?	1. Effectiveness of treatment 2. Free treatment 3 Low cost of treatment 4. Proximity 5. for the sake of confidentiality 6 Others, specify----------	------
Ask the following questions (41-52) for females only			
41	Have you ever used modern contraceptives?	1.Yes 2. No Skip to Q 43	------
42	If no, what are the reasons? (more than one answer is possible)	1. I have infrequent sex 2. Husband/partner opposed 3. Parents opposed 4. Religious Prohibition 5. Lack of knowledge about contraceptives. 6. Fear of side effects 7.health service providers have negative attitude 8. Sex was unplanned 9. Service not available 10. Want to have children	------

		11. Others specify ----------	
43	Have you ever been pregnant?	1 .Yes 2. No Skip to Q 53	-----
44	How old were you when you first became pregnant? (Enter age)	1.Age ----------years 2. Don't know/ remember	------
45	If yes, how many times have you been pregnant? (Enter number)	---------- Times	-----
46	If you have been pregnant, how many of your pregnancies were planned?	----------(enter number)	-------
47	Sometimes a girl becomes pregnant and decides to abort or stop the pregnancy. Have you ever aborted or stopped a pregnancy?	1 .yes 2. No 2. No Skip to Q 53	-------
48	If yes, how many times did you have abortion?	_____ Times	--------
49	If there was abortion, whom did you first discuss the issue with?	1.My partner/husband 2.My boy friend 3. My friends /peers 4. My parents 5. Health workers 6. Traditional healers 7. Local abortionist 8. Others, specify ----------	
50	Why did you aborted or terminated the pregnancy?	1.For fear of my family 2.to continue my education 3.It was unplanned (unwanted) 4.It was out side marriage 5.Economical problem 6.Others _____	
51	Where did you abort?	1. At public health institution 2. At private clinic 3. At abortionist's house 4. Others, specify ----------	------
52	Could you tell me why you preferred to seek abortion care in this place?	1.Effectiveness of treatment 2.Free treatment 3 Low cost of treatment	

		4. Proximity 5. Confidentiality 6. Others, specify----------	
Part four: The following questions are concerning attitudes and believes towards risks of sexual activities and their prevention			
53	Do you have any source of information about adolescent development and sexual changes?	1.Yes 2.No	
54	From which person or from where do you learn most about adolescence and sexuality? Circle the major 3 sources	1.My parents 2.sexual partner (husband/wife) 3. Other family members 4. Boyfriends /girl friends 5. Friends /peers 6. Health institution 7.Religious leaders 8. Newspapers, posters, or pamphlets 9. The radio 10. Others, specify ----------	
55	Do you know any ways to avoid unwanted Pregnancy	1. Yes 2. No. Skip to Q 57	
56	If yes, what are the ways to avoid getting pregnant?	1. Safe period/abstinence 2. Withdrawal 3. Oral contraceptive pills 4. Injectables. 5. Norplant. 6. IUDs. 7.Female sterilization. 8.Male sterilization 9. Condom 10.Foam 11. Intercourse in the up right position 12.Washing the female genitalia after intercourse 13. Others, specify-------	
57	It is possible for a girl to become pregnant the first time she makes sexual intercourse.	1.Yes 2.No 3.Don't know	
58	During which part of the menstrual cycle does a woman have the greatest chance of becoming	1.During her period 2.Right after period is ended	

	pregnant	3.Just before her period begins 4. In the middle of her cycle 5.The same throughout 6. Don' know	
59	Have you ever heard about HIV/AIDS	1.Yes 2.No Skip to Q 66	
60	If yes, from which person or from where do you get more information about HIV / AIDS	1.My parents 2.sexual partner (husband/wife) 3. Other family members 4. Boyfriends /girl friends 5. Friends /peers 6. Health institution 7.Religious leaders 8. Newspapers, posters, or pamphlets 9. The radio 10. Others, specify ----------	
61	Is there anything a person can do to avoid getting STIs and HIV/AIDS?	1.Yes 2. No Skip to Q 63 3. I do not Know Skip to Q 63	
62	If yes what can a person do to avoid getting STIs and HIV/AIDS	1. Sexual abstinence. 2. Avoid casual sex. 3. Remain faithful to a partner. 4. Use condoms in every act of sexual intercourse. 5. Avoid sex with CSWs. 6. Others specify ----------.	
63	If you look carefully, you can know if someone has HIV.	1.Yes 2.No 3.Don't know	-----
64	Is AIDS curable?	1. Yes 2. No 3. Don't know	-------
65	A person can get HIV the first time he or she has sex.	1. Yes 2. No 3. Don't know	
66	Have you ever heard about STDs	1 .yes 2. No 2. No Skip to Q 69	

67	If yes, which diseases do you know about?	1.Gonorrhea. 2.Syphilis. 3.Chancroid. 4. Lymphogranuloma Venereun 5. HIV/ AIDS. 6.Others, specify --------	
68	What additional health problems (complications) can they develop if people do not get early treatments for STDs ?	1.Exposure to HIV 2.Sterility 3.Urethral stricture 4.Cancer 5.Others_____ 6.Don't know	
69	Using condom is a sign of not trusting your partner	1. Agree 2. Not sure 3. Disagree	--------
70	A boy should have sex before he gets married.	1. Agree 2. Not sure 3. Disagree	-------
71	Discussing condom or contraceptive with young people promotes promiscuity	1. Agree 2. Not sure 3. Disagree	--------
72	Do you believe you have done anything that may have put you at risk of getting the HIV virus?	1. Yes 2. No Skip to Q 74 3. Don't know Skip to Q 74	
73	If yes, why	1.Have had sex without condom 2.More than one sexual partner 3.Have had sexual intercourse with commercial sex workers 4.Injuries with contaminated sharps 5.Others specify----------	
74	If no, why not	1.Have never made sexual intercourse 2.I have abstained from sex 3.I did not share injections 4.I always use condom 5.Others, specify----------	
75	Have you ever heard about voluntary counseling and testing for HIV?	1 .yes 2. 2. No	

76	Did you ever undergo HIV test?	1 .yes 2. 2. No	
77	Are you volunteer to undergo voluntary counseling and testing for HIV?	1 .yes 2. No	-----

THANK YOU!

Appendix C: Summary of FGD South Gondar, February 2003

Issues Raised	Female-urban	Male Urban	Female Rural	Male Rural	Notes
1.Perception of sexual practice among peers					
Premarital sex	×	×	×	×	
Multiple sex partner	×	×	×	×	
Sex outside of marriage	×	×	×	×	
Sex with female sex workers	×	×	×	×	
Condom use among peers (practice)	×	×	×	×	
1.Perception of risks of sexual activities	×	×	×	×	
HIV/AIDS	×	×	×	×	
STDs	NR	NR	NR	NR	
Unsafe abortion	×	×	×	×	
School dropout	×	×	×	×	
Negative reaction from parents/community					
Migration	NR	NR	×	×	
3.Prevention Methods					
3.1 Condom					
Knowledge	×	×	×	×	
Can prevent HIV/STIs	×	×	×	×	
Can prevent unwanted pregnancy	×	×	×	×	
Available in shops	×	×	×	×	
Available in health institutes	×	×	×	×	
Available in pharmacy	×	×	NR	NR	
Abstinence / Being faithful	×	×	×	×	
4. Barriers to Preemptive Methods					

4.1 Misconceptions/rumors					
Condom reduces sexual desire	×	×	×	×	
Condom bursts during intercourse	×	×	×	×	
Condom contains the virus in it	×	×	×	×	
Condom use is a singe of infidelity	×	×	×	×	
Sex is force of nature (one can not control)				NR	
4.2.Social pressure					
Attitude of parents / community	×	×	×	×	
Attitude of religious leaders	×	×	×	×	
Rape /forced sex	×	×	×	×	
Delayed age of marriage	×	×	×	×	
Peer pressure	×	×	×	×	
Age difference between couples/early marriage	NR	NR	×	×	
Forced idleness	×	×	×	×	
4.1.Service not convent/friendly	×	×	×	×	
4.2. Risk behaviors	×	×	×	×	
Alcohol	×	×	×	×	
" Chat" and cigarettes	×	×	NR	NR	

NR= Not raised as a problem