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ASSESSMENT OF PERCEIVED BARRIERS TO BEHAVIORAL CHANGE TOWARDS THE PREVENTION OF HIV/AIDS IN BAHIR DAR TOWN, NORTHWEST ETHIOPIA

BY
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List of Abbreviations

AAC - Anti -AIDS Club
AAUMF - Addis Ababa University Medical Faculty
AIDS - Acquired Immunodeficiency Syndrome
ARHB - Amhara Region Health Bureau
BCC - Behavioral Change Communication
BSS - Behavioral Surveillance Survey
CBO - Community –Based Organization
CDC - Centers for Disease Control
CSW - Commercial Sex Worker
DCH - Department of Community Health
EPHA - Ethiopian Public Health Association
FHI - Family Health International
FGD - Focus Group Discussion
HBM - Health Belief Model
HIV - Human Immunodeficiency Virus
IEC - Information, Education, Communication
ICN - International Council for Nurses
KAP - Knowledge, Attitude, Practice
MOH - Ministry of Health
MTCT - Mother to Child Transmission
NGO - Non-Governmental Organization
PLWHA - People Living with HIV/AIDS
PHRD - Policy and Human Resource Development
SSA - Sub - Saharan Africa
STI - Sexually Transmitted Infection
UNAIDS - Joint United Nations Program on HIV/AIDS
USAID - United States Agency for International Development
USA - United States of America
VCT - Voluntary Counseling and Testing
WHO - World Health Organization

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ABSTRACT

Globally, HIV/AIDS has created an enormous challenge to the survival of mankind. It has now become the leading cause of death in many developing countries especially in the Sub-Saharan African countries. Industrialized countries have achieved significant result in the prevention and control of the disease mainly through the behavioral change interventions.

Ethiopia is one of the seriously affected countries by the epidemic. The disease is affecting the majority of the population, particularly the productive age group between 15-49 years, resulting in social and economic crisis. Though continuous Information, Education and Communication (IEC) interventions have made efforts in increasing awareness about modes of transmission and prevention of HIV/AIDS, they have not successfully been able to bring about the desired behavioral change among the population.

Thus, the main objective of this study was to assess perceived barriers to behavioral change towards the prevention of HIV/AIDS among the urban community of Bahir Dar, where the highest prevalence of HIV infection was already documented. The study design was cross-sectional, including both quantitative and qualitative methods. Using multi-stage sampling technique, 910 urban residents aged 15-49 years were selected and interviewed.

The study has found out that though the majority of the population had awareness and favorable attitudes towards the prevention of HIV/AIDS, some of them did not show behavioral change towards its prevention. The perceived barriers to the behavioral change were low IEC interventions (31.3%), unemployment (29.5%), increase in illegal video showing and khat houses (28.7%), low involvement of the community in the prevention activities (22.5%), gender inequalities (12.2%), traditional malpractices (10.8%), stigma and discriminations attached to HIV/AIDS (10.1%), inadequate recreational facilities for the youth (8.1%) and low involvement of the religious organizations in the prevention efforts (7.0%).

Some of the socio- demographic characteristics, namely, sex, age, marital status, occupation and exposure to mass media were found to influence change of behavior towards the prevention of HIV/AIDS. The majority of the respondents were aware of HIV/AIDS and could answer at least

one means of transmission and preventions HIV/AIDS, but only 19.6% and 29.1% of the respondents could answer the three major means of transmission and prevention of the disease, respectively, indicating that there is still low level of comprehensive knowledge related to HIV/AIDS among the population.

In general, the study indicated that the behavioral change towards the prevention of HIV/AIDS can be affected by some of the socio-demographic variables of the population. Moreover, the perceived barriers towards the prevention of HIV/AIDS among the population were low level of comprehensive knowledge about HIV/AIDS and factors related to communication, cultures, socio-economic status and gender relations.

Thus, besides the poverty alleviation programs, community and multisectoral HIV/AIDS related-interventions through appropriate and effective IEC strategy are vital in removing the barriers and bringing about sustainable behavioral change towards the prevention of HIV/AIDS among the population.

1. INTRODUCTION

Previously unknown, the human immunodeficiency virus (HIV) is a lethal pathogen that has now infected millions of people throughout the world. Acquired immunodeficiency syndrome (AIDS) has responded poorly to the conventional medical and public health approaches in part, because of the complexity and unique features of the retrovirus (1).

The disease has now become the leading cause of death in this world creating negative impacts on health, education, agriculture, industry and all other walks of life (2).

Since its recognition in the early 1980s till the end of 2002, over 42 million people were living with the virus out of which more than 70% were in the sub-Saharan Africa (SSA). Over 90% of the infection occurs in the developing world (3).

Despite this alarming figure, AIDS is still blighting the lives of another 16,000 people worldwide everyday out of which 10% of them are among children, 50% among young aged 15-24 years and 40% among women (4).

HIV/AIDS is now a growing public health problem with complex social and behavioral issues related to control, prevention of the transmission and care of patients by medical personnel. The social stigma associated with HIV/AIDS, the disease's long period of invisibility and the determination of whether the infection is related to behavioral risks such as sexual transmission

or occupational exposure add to the complexity of HIV/AIDS in many countries especially the Sub-Saharan Africa (5).

AIDS is probably not emerged as a full- blown epidemic in Africa had there not been a mixing of people from tribes and cultures. With urbanization, came to the greater possibility for individuals afflicted with HIV to spread the virus to others. Rampant prostitutions and sexual relationships between people of different tribes and increased opportunities for women to escape male domination by engaging in extra-marital sex also helped facilitate the spread of HIV/AIDS in Africa (6).

In Ethiopia, the first cases of HIV/AIDS were detected in 1986. At the end of 2001, about 2.2 million people in the country were living with the virus out of which about 200,000 were children. Consequently, the number of people living with HIV/AIDS (PLWHA) and death from AIDS remarkably increased, with enormously increasing demands of care and support. The adult prevalence rate was estimated to be 6.6 % (2001) and projections of infected cases with the virus are expected to increase over 4 millions by the year 2014 (3).

As in many parts of the world, HIV/AIDS is more common in urban than rural Ethiopia. The urban HIV prevalence rate was estimated to be 13.7% while that of rural areas remains relatively low (3.7 %) (2001). A sentinel surveillance conducted by the Ministry of Health (MOH), has found out that the highest prevalence of HIV was reported among pregnant women in Bahir Dar (23.4%) followed by Jijiga (19%), Nazareth (18.7%) and Addis Ababa (15.6%) (2001). These figures indicate that the prevalence rate of HIV/AIDS is increasing form year to year indicating

low behavior change towards its prevention, despite continuous IEC interventions for more than a decade (7).

The routes of transmission of HIV are the same around the world but differing patterns of human behavior causes the virus to travel more in certain social networks (8). In developed countries, the major modes of transmission are homosexuality and drug abuse whereas in the sub-African countries, more than 80% of the mode of transmission of the HIV/AIDS in the adult population is heterosexual intercourse. Over 90% of infections in children resulted from mother to child. Women contribute for 55% of all HIV–positive adults (6, 9).

Had safer sex practice been followed, the rate of HIV infection would undoubtedly be lower. But, many African men and women find condoms incompatible with their sexual and cultural norms. Moreover, those who would like to use condoms often find them inaccessible and /or unavailable. And, even when available, women frequently shy away from taking advantage of them, feeling that they will be stigmatized and ostracized (6). On the other hand , in most African countries the barrier method , the male condom , that has practical usefulness to protect against HIV and other sexually transmitted infections (STIs), has its limitations such as religious disapproval, perceived reduced sexual satisfaction, distribution and storage problems (9).

It is believed that the ultimate goal of any information, education, communication (IEC) activities related to HIV/AIDS is to bring about positive behavioral change. If there is no behavioral change, there will be no subsequent improvement of health status of the population (10). The developed world achieved significant results in the prevention and control of the

disease mainly via the behavioral change interventions while the developing countries haven't yet achieved (6).

Generally, no intervention aimed at changing behaviors to promote health can be 100% effective. Because some of the behaviors and activities that need to change behavior in order to avert HIV infection are pleasurable , it should be no surprise if short term interventions did not lead to immediate and permanent behavioral change. By any means, there is no question that the prevention programs through behavioral change works and remains the best and most cost - effective approach. In fact, history shows prophylaxis and immunizations are only partially effective in the absence of behavioral change (2).

Since HIV/AIDS has a direct linkage to life style and behavior, an understanding of the extent of knowledge, attitudes, beliefs and practice of the population about HIV/AIDS assume significance in monitoring and evaluating impacts of HIV/AIDS and developing effective strategies for HIV/AIDS prevention and control programs in the near future (11).

2. LITERATURE REVIEW

2.1. KAP related to HIV/AIDS

Acquired immune- deficiency syndrome is an illness characterized , according to CDC criteria ,as the presence of antibody to HIV and a T4 cell less than 200 /µl of blood , or the presence of HIV and certain opportunistic infections including diseases that affect both the body and brain (2).

AIDS was first described in the USA in 1981 and the virus was then identified in 1983. No drug offers cure and most of the people living with the virus cannot afford and will not receive those antiretroviral drugs that offer them some temporary improved quality of life. An HIV preventive vaccine or curative drug is a wishful thinking. The single preventive method is positive behavioral change towards its prevention (3).

The major modes of transmission are sexual, parentral and perinatal. Studies have revealed that the best way to protect against HIV infection is sexual abstinence, followed by mutual monogamous sexual relationship (8).The mutual monogamy with known sero-negative partner is the best and the most effective way to avoid risk of HIV transmission (9). The third alternative preventive method is use of condom when the above two preventive methods are impractical (3).

The key to preventing HIV /AIDS is to stop the transmission of HIV virus before it enters the human body (2). The prevention of AIDS appears simple. But, unfortunately, the task is not at all simple. Disseminating HIV/AIDS knowledge is different from changing HIV attitudes and

intention, which is different again from changing behavior that put one at risk for HIV/AIDS (13).

As many researchers have discovered with a number of diseases prevention practices, people generally are resistant to change their attitudes and behavior, even though the means of disease prevention is clear and effective, perhaps people do not understand the risk and the way to prevent it. Research has shown however, that when people clearly understand a health risk and means of prevention, they still are resistant to change. Additional research has demonstrated that even in cases, where people understand the risk, accepted the preventive method, and reported that they wanted to and would change, subsequent behavior didn't always change (14).

On the other hand, studies have indicated that a new behavior is most likely to be generally adopted if the categories of people, called opinion leaders adopt it. The difficulty with the behavior change needed for HIV/AIDS prevention is that they often consist of intimate behaviors which people are reluctant to endorse (15).

Changing sexual behavior is not an easy task. And in high prevalence areas, there is a feeling that most sexually active adults with any risk behavior are already infected. As the result , attention is now turning increasingly towards young people who are not yet sexually active or who are just active (16). Because of long period of time between HIV infection and clinical signs of AIDS, risky behaviors are not easily perceived as associated with HIV infection, making the change in behavior a difficult undertaking. The understanding of HIV and related behaviors is

clearly far from complete, especially in the youngest age groups where there is most evidence for change (17).

The central concern of IEC is bringing about good health behavior. Positive changes in health behavior are ultimate aims of IEC programs. If behaviors change but health is not subsequently improved, the result is a paradox that must be resolved by examining other issues (18). It is important to know about how particular media can help achieve good behaviors related to HIV/AIDS. Each medium has its own advantages and disadvantages, so that each may be suited to particular circumstances. For example, researches have shown that mass media can raise awareness of specific facts, because the mass media are assumed to carry a certain authority and reliability. Mass media can also model behaviors and positive attitudes in a person of respected members of the target community. Later on in the process, however, target populations appear less interested in media authority and they are in opinions and behaviors of people to whom they feel close. Interpersonal communication becomes primary, while the mass media play a supporting role (19).

Experience has shown that tracking behavior is an essential for strengthening prevention and control programs. Moreover, the behavior data serve as early warning systems for HIV/AIDS. Tracking behavior improves program evaluation, and any change in behavioral data can help explain variation in the disease prevalence (20).

An important step in the modification of health behavior is motivating an individual to want to change the behavior. When an individual has insight into his own motivation then it is easier to

bring about positive behavioral change. Attitude–change approaches to changing behavior implicitly assume that if people can be persuaded that the current health behaviors are poor, they will be motivated to change those health habits. Studies have also demonstrated that it is far preferable to keep people from developing problematic behaviors than to try to help them stop behaviors once they are already in place (21, 22).

There are models and frameworks used in HIV/AIDS prevention that are derived from social psychology and concepts of communication (9). The most highly influential and widely researched theory of why people practice health behavior is the health belief model .This model states that whether or not a person practices a particular health behavior can be understood by knowing two factors: the degree to which the person perceives a personal health threat and the perception that a particular health practice will be effective in reducing that threat (21). According to this model, sufficient knowledge of the disease is essential but not the only prerequisite to behavioral change. The model explains that socio-demographic factors such as education, age, sex, race, ethnicity and socio-economic status are believed to influence behavior indirectly by affecting perceived threat, outcome expectation and self- efficacy. The perceived barrier is most powerful, and single predictor of HBM dimensions in all studies related to health behaviors. The major factor that contributes to the lack of effective prevention against HIV/AIDS is the absence of an appropriate method for identifying people who are at risk and determining factors that should be modified (21). The HBM assists in understanding why many young people frequently engaged in unsafe sexual practices. For instance, the perceived drawbacks of condom use (embarrassment and lack of pleasure) are salient and come quickly to mind. The perceived benefits are harder to visualize (6).

2.2. Barriers to behavioral change towards the prevention of HIV/AIDS

The most difficult area of HIV/AIDS prevention lies in the areas of behavior change. Behavioral change is certainly difficult to inspire and extremely hard to measure. Furthermore, the theoretical basis for the behavior has been difficult to characterize (6). For instance, despite the efforts made by national government and NGOS, South African populations have been slow to adopt safer sex practices. The reasons for the lack of the success in changing sexual behavior are complex, but some of the contributing factors include culture, gender and the high prevalence of violence (12).

There are many factors that influence the practice of health behavior related to HIV/AIDS including social, emotional , cognitive factors , perceived symptoms and factors related to access to health services. Health behavior differs reliably by demographic variables. One study has shown that health behaviors especially those related to HIV/AIDS are commonly practiced by more affluent, better educated people under low level of stress and those with available social support. It was indicated that individuals who are low in socio –economic status, who are females and who do not have convenient health services are less likely to use health services generally do not practice health behavior that require health related interventions (21, 23). In addition, behavioral change does not occur in an overnight. To address multiple factors influencing risks and vulnerability requires careful planning, time, efforts and a lot of other resources that will help in tracking behaviors (21).

Giving people information about HIV/AIDS and the risks of unsafe sexual practices is indispensable. But even when we know the risks of unsafe sex, it can often be difficult to stop it. Some barriers that stop people from practicing safe sex come from the wider environment; for instance, social and economic inequalities between sexual partners can make people hard to have safe sexual practices .The social and economic inequalities also lead to lack of access to sexual health, information and services including condoms. Negative cultural or religious ideas about sex and sexuality, and laws that stop people from getting the information and services they need, can make safer sex difficult. Attitudes about gender also affect people's ability to be in control of sex. Some practical approaches and activities that can help people practice safer sex include building people's knowledge and skills , so that they feel more confident to discuss about safer sex , addressing social and community barriers that make it difficult for people to have safer sex (24).

Studies have demonstrated that the IEC intervention regarding HIV/AIDS has achieved most of its objectives in upgrading the individuals' knowledge of HIV prevention, with some changes in attitude but the behavioral change observed as the result of IEC interventions is low, in many African countries. Another study in India has shown that, the knowledge of HIV/AIDS was found to be almost non-existent among respondents in urban slums of India, especially among women. The study has found out that the illiteracy, linked with poverty, created a gap in knowledge about HIV/AIDS (25). On the other hand, poverty and substance abuse lead some people to increased risks of HIV infection. Inequalities in job opportunities leave women depend on men for economic needs, which can place them at the mercy of sexually irresponsible or physically abusive men. Coercion is not only the factor causing poor women to have unsafe sex

for their emotional gratifications, but to preserve the relationship and their own self - esteem, minority of women frequently choose unsafe sex. In South Africa, for instance, sexual mores, gender stratifications and gender role-stereotypes operate powerfully to discourage men and women from practicing safer sex (6). One study has also revealed that urban women of low socio-economic status in Argentina were found to be particularly vulnerable to HIV as result of their gender and low social status (25).

A study done in Uganda has found out that the spread of HIV/AIDS is mostly via sexual intercourse and largely influenced by behavior and attitudes. As it was revealed by the study, changes of behavior and attitude are significantly related to age, sex, education, ethnic group and number of patients' deaths known to respondents. Moreover, the study has demonstrated that more educated respondents had experienced significantly more changes in attitudes and behavior than the less educated. In addition, the better educated tended to be more explicit in stating reasons for changes taking place, which is consistent with other studies showing that the educated people to be better informed about HIV/AIDS and thus more likely to have more tolerant attitude towards AIDS patients .It was also shown by the study that over 70% of the respondents, all of whom were aware of the AIDS epidemics, were willing to go for HIV testing to know their sero- status. This bold decision signifies a major change of attitude towards the prevention of HIV/AIDS (26).

Another study conducted in Africa has indicated that poverty was the primary cause of spread of HIV/AIDS in Africa which when combined with poor governance and lack of clear political

commitment, inadequate health infrastructure, and high illiteracy levels were major causes for the disaster (27).

Recently, UNAIDS, reported that HIV/AIDS preventive behavior not only depends on cognitive variables, but also on contextual factors like government policy, culture, socio-economic status, gender relations and spirituality (9). These five domains are interrelated although they do have different impacts on preventive health behaviors. The framework recognizes that individual is the product of the context, and for HIV/AIDS communication strategy to have a meaningful effect, intervention programs should begin at least with one or a combination of these domains (25).

Generally, in order to bring about positive behavioral change, a well-implemented HIV/AIDS prevention and control strategy should target the behavior to reduce risk and vulnerability by delaying the first sex, increasing condom use, reducing the number of sexual partners, promoting access to voluntary counseling (VCT) and reducing other forms of compromising behaviors such as excessive alcohol consumption, khat chewing, cigarette smoking and drug abuse. Moreover, in order to reduce the gap between knowledge and behavioral change towards the prevention of HIV/AIDS, intensive, extensive and sustainable IEC activities through all possible media, materials and methods, taking into account the five contextual domains of HIV/AIDS prevention framework should be planned, tested, implemented and evaluated to bring about a significant behavioral changes among the population (25, 28).

2.3 Significance of the study

AIDS is one of the emerging public health problems that could have devastating impacts on the socio-economic development of a country (28). The HIV prevalence rate among the sexually active adults in general population has surpassed 1% indicating existence of generalized epidemic among the overall population. Currently, the hospital bed occupancy rate due to HIV/AIDS has reached more than 20% in many hospitals. This has led to severe burden for health service provision (29).

About 91% of the infection in Ethiopia occurs among young adults aged 15-49 years. Given that this range encompasses the most economically productive segment of the population, the highest number cases in this broad age group adversely affect labor productivity and hence economic development of the country. The age range also represents the period of life when investments in education are just beginning to pay off. Bringing about positive behavioral change through preventive efforts is currently the only effective way to check the spread of HIV in the majority of the population (14).

In Ethiopia, the majority of the adult population has adequate knowledge about methods of HIV/AIDS prevention. However, some studies have revealed that there is poor practice towards HIV prevention. This indicates that knowledge about HIV/AIDS has no or relatively little relationship to risk- reduction behavior (30, 31).The behavioral surveillance survey (BSS) carried out in 2002 (30), has found out that:-

- About 98% of the study population were aware of HIV/AIDS
- Almost all group of the study subjects knew at least one preventive method

- Misconception about HIV/AIDS was high irrespective of the level of knowledge
- Own-risk perception was very low in almost all target groups
- There was gap between knowledge and behavioral change

Some of the barriers attributed to low behavioral change (30) were:-

- Low community interventions
- High prevalence of stigma and discrimination among the population
- Low number recreational facilities especially for the youths
- Low job opportunities for the youths especially females
- Low IEC interventions
- High number of illegal video showing house and night clubs

A community –based study conducted in western Ethiopia, has indicated that safe sex practice is less practiced as compared with the observed level of knowledge of transmission and prevention of HIV/AIDS. Considerable proportions of the study subjects were able to correctly reply the common modes of the transmission and preventive methods of HIV/AIDS, but risky behavior is still prevailing (32). Another study conducted among college students in Ethiopia, has indicated that though college students are well- informed about HIV/AIDS and have adequate knowledge on how to prevent the disease, poor attitude and behavioral change towards protection from the disease was documented (33). One similar study also revealed that the IEC interventions have been effective in increasing awareness about HIV transmission and prevention, but, they have not yet successfully been able to bring about the desired behavioral change towards the prevention (34).This implies

> that many people especially young adults, do not do what they see, but most of them perform what they feel. In short, knowledge in itself may be necessary but it is not sufficient for bringing about positive behavioral change among a population. Thus, for the foreseeable future, prevention through behavioral change is the only way to curtail the fast spread of this deadly epidemic (2).

It was indicated in the BSS (30), that the gap between knowledge and behavior was apparent especially among the youth. These groups knew protective behaviors against HIV infection but they still practice pre-marital sexual intercourse and have more than one partner in the past one year (30). On the other hand, with efforts of health education and promotion interventions there are changes in behavior as seen in some African countries. The increase in age of the first sexual intercourse and high proportion of population ever using condom indicated the success in line with interventions directed at changing sexual risky behavior. The effects of high mortality and morbidity, which affected most of the households, may also explain the most obvious changes in condom use behavior in these countries (17).

In Ethiopia, IEC interventions have been carried out through different approaches in different areas for more than a decade. In spite of the IEC interventions, many community-based studies in Ethiopia have indicated that there is still a gap between knowledge and behavioral changes towards the prevention of HIV/AIDS. Very few studies have attempted to examine the barriers to change of behavior towards the prevention of HIV/AIDS among the urban population in Ethiopia. (9, 17, 20).

Thus, this study is intended to assess perceived barriers to behavioral change towards the prevention of HIV/AIDS among the urban community in Bahir Dar. The findings of the study can be utilized as baseline information for further studies related to barriers to behavioral change interventions.

3. OBJECTIVES OF THE STUDY

3.1 General Objective

To assess perceived barriers to behavioral change towards the prevention of HIV/AIDS among the population aged 15-49 years in Bahir Dar Town.

3. 2 Specific Objectives

- To assess knowledge, attitudes and practices pertaining to HIV prevention and VCT
- To assess factors affecting behavioral change towards the prevention of HIV/AIDS
- To assess sources of information towards HIV prevention

4. SUBJECTS AND METHODS

4.1 Study area

The study area is Bahir Dar Town located in northwest Ethiopia. It is the capital of the Amhara region, located about 563 kilometers from Addis Ababa with an estimated population of 160,603 of which 75,901 are males and 84,702 females (35). The town is subdivided into 17 kebeles. In the town, there is one government hospital, one health center, one health station and one regional research laboratory. Furthermore, there are 13 private clinics and three diagnostic laboratories at different levels (35).The town is attractive to tourism mostly due to its vicinity to Lake Tana. It is the area where the highest prevalence of HIV was documented among the pregnant woman (7). Furthermore, a study has demonstrated that the prevalence of HIV infection among the commercial sex workers in the town was estimated to be 65-70% (36).

4. 2 Study Design

The study design was cross sectional quantitative survey substantiated by qualitative method.

4. 3 Study Population

All individuals residing in Bair Dar Town were the source population. The study subjects were 922 urban residents aged 15-49 years living in Bahir Dar Town. (See sample size calculation). The subjects included are those urban residents aged 15-49 years and those adults who are residing in the study sites for more than 6 months during the data collection. All adults who are unable to hear and/or mentally disabled ,individuals staying in the study area for less than six months and those who are unable to hear and speak Amharic were exclude from the study.

4.4. Sample size

The sample size was determined considering an estimate of 50% expected proportion of behavioral change towards the prevention of HIV/AIDS among the urban residents aged 15-49 years, giving any particular outcome to be with in 5% marginal error and 95% confidence interval of certainty (alpha =0.05). Based on this assumption, the actual sample size for the study was computed using one- sample population proportion formula as indicated below.

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

Where, n = Sample size

$Z\alpha/2$ = Critical value =1.96

P = Expected proportion of behavioral change=50%

d = Precision (marginal error) =0.05

$$n = \frac{(1.96)^2 \; (.5 \times .5)}{(0.05)^2} = \underline{384.16}$$

The design effect was 2, and adding 20% non-response rate,

384.16x2= 768.32+20%= 922 study subjects.

4.5 Sampling procedure

All the 17 kebeles in Bahir Dar Town were grouped into 3 categories. Population size (35) was used to categorize low density (<6,000), mid- density (6,000-11,000) and high density (>11,000). From each category, one kebele was selected by simple random sampling (SRS). The sample size was distributed to the three kebeles proportionate to the population size. Based on this distribution, from each kebele, households were selected using systematic sampling. Individuals aged 15-49 years in the households were randomly selected and interviewed (see figure 1). When there was more than one person aged 15-49 years in one household, only one person was selected using lottery method. When the person in the specified age was not found in the household, the next nearest household was included in the survey. Three repeated visits were made in cases of unavailability of the selected subjects.

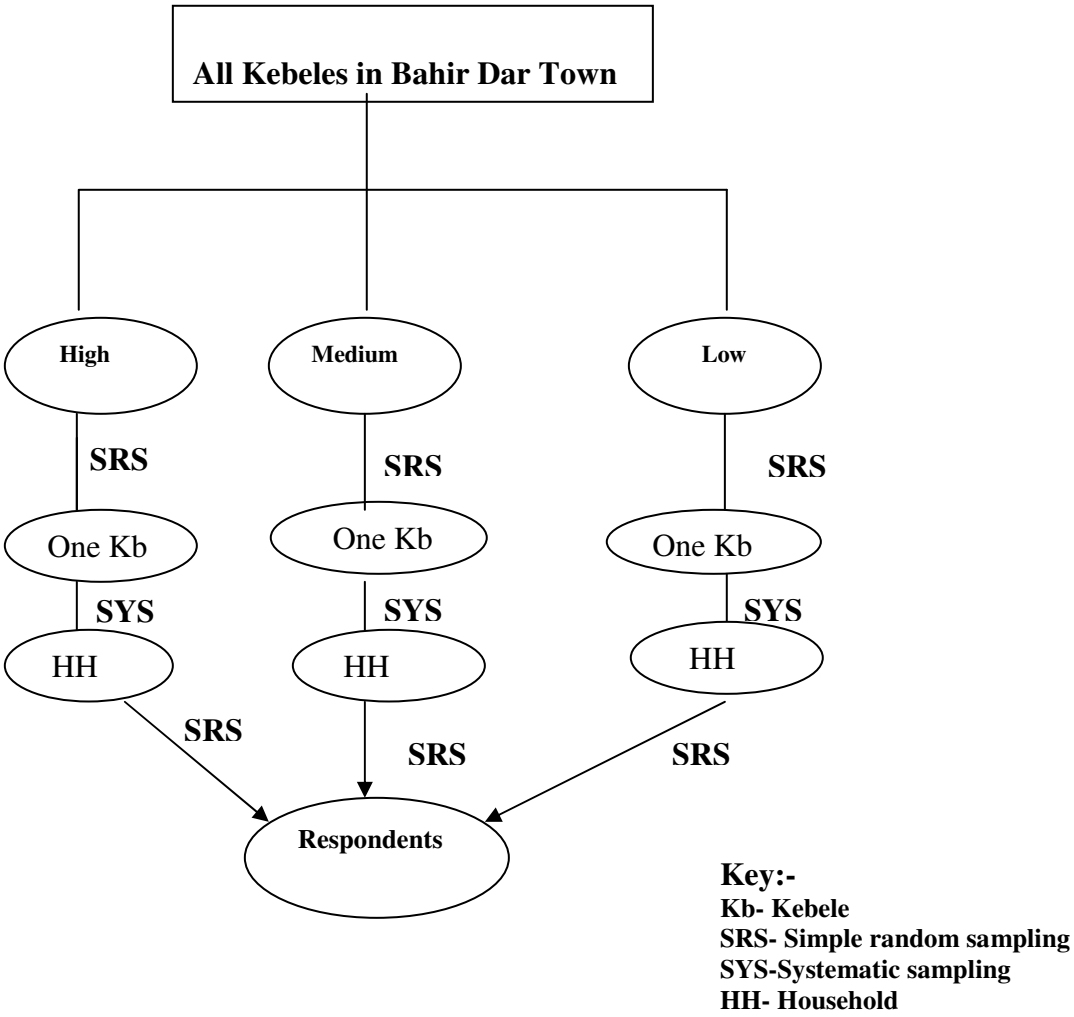

Fig.1 Schematic presentation of the sampling procedure

4.6. DATA COLLECTION TOOLS

4.6.1 Quantitative data

Ten data collectors (five females and five males) who have completed grade 12 and could speak Amharic were recruited. Two supervisors were selected from the Amhara Region Health Bureau (ARHB). The main responsibility of the supervisors was checking whether the questionnaire was correctly and consistently completed or not. The enumerators and the supervisors were given training for 3 days on procedures, techniques and ways of collecting the data. The data were collected from the selected households, using the structured questionnaire. The questionnaire was developed in English and translated into Amharic and then back to English to check for its consistency. Prior to the actual data collection, the Amharic version questionnaire was pre-tested on 20 respondents in the same age group of the study subjects in a kebele not included in the main survey. The questionnaire was tested for clarity, acceptability, flow, repetition and time required in interviewing one respondent. Based on the pre-testing, minor modifications of questions, wordings, phrases and time required to interview a respondent were made. Before the commencement of the actual data collection, discussions were held with Amhara region council and health bureau, special zone administration and health office, and kebele leaders in order to obtain necessary information and supports. The data collection was completed within six days to avoid contamination of information. Before starting the interview respondents were briefed about the purpose of the study by enumerators after getting their informed consents. The principal investigator coordinated all administrative and logistic conditions. Moreover, informed and surprised supervisions were made throughout the data collection processes by the principal investigator and the supervisors.

4.6.2 Qualitative data

Focus Group Discussion (FGD)-The main objective of the FGD was to substantiate the quantitative data and obtain in-depth information related to barriers to behavioral change in preventing HIV/AIDS.

A total of five FGDs were carried out. Selection of the FGD discussants was made using a non-probability sampling. During the selection, sex, marital status and age of the participants were considered as major criteria. The five FGDs were composed of unmarried males and females, married males and females and religious leaders each group consisting of 10 members (see fig.2). It took on an average 90 minutes to conduct a FGD. The discussion was held in a private setting and quiet environment. The FGD was moderated by principal investigator with the assistance of trained note -taker and tape- recorder. Semi- structured questionnaire was used to guide the discussions. Finally, the discussion points of each group were transcribed and summarized based on the tape-record and the note.

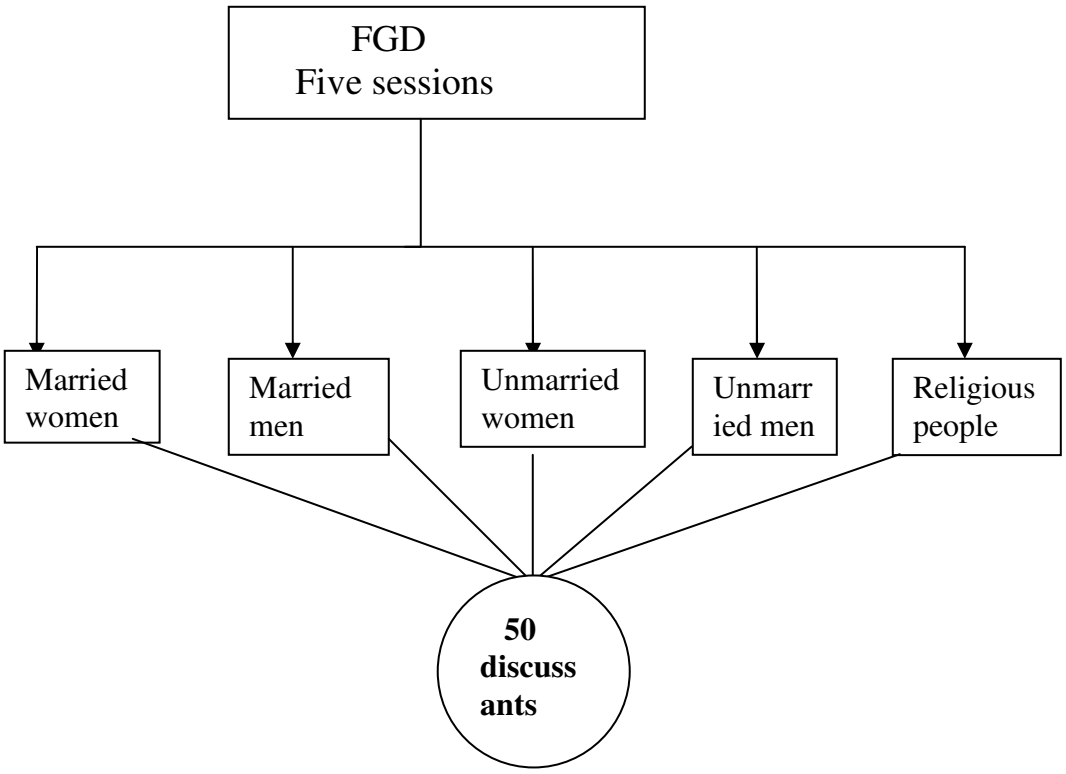

Fig. 2 Schematic presentation of Focus Group Discussion (FGD)

4.7 Data Quality Assurance

To assure the quality of the data, properly designed data collection instrument was developed. Training was given for data collectors and supervisors. Every day, the collected data were reviewed and checked for completeness and consistency by the supervisors and the principal investigator. Pre-testing and supervisions were made before and during actual data collection respectively.

4.8 Data Entry and Analysis

The collected data from each respondent were entered and analyzed using the EPINFO version 6 and SPSS version10 computer software packages. Data cleaning was carried out, and frequency distributions and cross tabulations were made for each of the variables. Odds ratios were computed to assess the strength of the associations. Binary logistic regression was used to see the effect of each independent variable on the dependent variables.

4.9 Study Variables

The following variables were used to fulfill the objectives of the study.

Dependent Variables

- Barriers related to IEC, socio-economic status, gender and culture
- Knowledge , attitudes and practices related to HIV prevention
- Preferences of settings and means of communications related to HIV prevention

Independent Variables

- Socio-demographic characteristics - sex, age, religion, ethnicity, marital status, educational status, occupation, income, access to radio and television.
- Sources of information related to HIV/AIDS

4.10 Ethical Consideration

Ethical clearance was obtained from AAUMF. A formal letter was written to all concerned authorities and permission was secured at all levels. Informed verbal consent was obtained from each respondent, after the purpose of the study was explained to him/her. Anonymity and confidentiality of the information was assured and privacy of each respondent was maintained throughout the data collection process.

4.11. Operational definitions of key terminologies

- **Perceived barriers** – factors considered by the individuals to be obstacles to the prevention of HIV/AIDS.
- **Behaviors**- actions undertaken by the individuals in response to decision related to HIV prevention, comprising: - a) sexual practice b) deciding the number of sexual partner c) condom utilization.
- **Behavioral change** –an individual who has been practicing abstinence from or being faithful to only one sexual partner or proper use of condom during sexual intercourse.
- **Knowledge**- Individuals' understanding related to HIV/AIDS.
- **Attitude** – Individuals' predisposition to respond in a favorable or an unfavorable manner towards the prevention of HIV/AIDS.
- **Practice**- an overt behavior or habit of an individual towards or against the prevention of HIV/AIDS.
- **Perception** – Individuals' awareness related to HIV/AIDS.
- **Knowledgeable about means of transmission of HIV/AIDS-** Subjects were considered knowledgeable about HIV transmission if they correctly identified the three major modes of HIV transmission, namely, unprotected sex, infected instruments and from mother to child.
- **Knowledgeable about means of prevention of HIV/AIDS-** Subjects were considered knowledgeable if they correctly identified the three major methods HIV prevention, namely, abstinence, being faithful to one partner and proper use of condom.
- **Substance abuse-**poor lifestyle that predisposes to HIV infection including khat chewing, alcohol drinking, cigarette smoking and drug use.
- **Comprehensive knowledge-** Having adequate knowledge of the three means of transmission and prevention of HIV/AIDS.

5. RESULTS

A total of 910 urban residents aged 15-49 years were included in the study, the overall response rate being 98.7%.The results of the quantitative and the qualitative survey are presented as follows.

5.1. Socio-demographic characteristics

The socio-demographic variables of the sample population are summarized in Table 1. The majority of study subjects 621 (68.2%) were females. Most of the respondents 496(54.5%) were in the age group of 15-24 years. About 237 (26%) were in the age group of 25-34, while the rest 177(19.5%) were in the age group of 35-49. The mean age of the study subjects was 25.5±8.7 years, with minimum and maximum value 15 and 49 years, respectively. The majority of the study subjects, 795 (87.4%) were followers of Orthodox religion while others were Muslims, 53 (5.8%), protestants, 42(4.6%) and others 20(2.2%) followers of other religions. The majority were Amhara ethnic group, 824 (90.5%) followed by Agaw, 32(3.5%), Tigre, 30(3.3%), and others, 24(2.7%).

Most of the respondents, 482 (53.0%) were not married at all, the rest 344(37.8%) were married and 84(9.2%) comprise of those divorced, separated and widowed. Regarding the literacy status, 180 (19.8%) were unable to read and write, 48 (5.3%) could read and write, 116 (12.7%) had elementary school education, 489 (53.7%) had attended high schools and 77 (8.5%) were above $12^{th.}$ grade. Most of the study subjects were students, 293(32.2%), housewives, 215 (23.6%), private employees, 124 (13.6%), trader, civil servants, 83 (9.1%), 116(12.7%), commercial sex workers (CSWs), 17(1.9%) and others, 62 (6.8%).

Pertaining to the economic status of most of the study subjects, 206 (22.6%) earned less than 100 birr, 93(10.2%) 100-299 birr, 71(7.8%) 200- 300 birr and 156 (17.1%) 300 birr and above per month. A considerable number of respondents, 384(42.2%) could not identify their household income. Majority of the study subjects, 810 (89.0%) had radio while 383 (42.1%) had television at a household level.

Table 1. Socio-demographic characteristics of the respondents, Bahir Dar Town, December 2003. (n=910)

Variables	Frequency	Percent
Sex		
Female	621	68.2
Male	289	31.8
Age (years)		
15-24	496	54.5
25-34	237	26.0
35-49	177	19.5
Religion		
Orthodox	795	87.4
Muslims	53	5.8
Protestants	42	4.6
Others	20	2.2
Ethnicity		
Amhara	824	90.5
Agaw	32	3.5
Tigre	30	3.3
Others	24	2.7
Marital status		
Single	482	53.0
Married	344	37.8
Others	84	9.2
Education		
Illiterate	180	19.8
Read and write	48	5.3
Grade 1-6	116	12.7
Grade 7-12	489	53.7
12+	77	8.5
Occupation		
Students	293	32.2
House wife	215	23.6
Private employee	124	13.6
Trader	116	12.7

Civil servant	83	9.1
CSW	17	1.9
Others	62	6.8
Monthly income		
<100 Birr	206	22.6
100-199 Birr	93	10.2
200-299 Birr	71	7.8
300+ Birr	156	17.1
Do not know	384	42.2
Radio in the HH		
Yes	810	89.0
No	100	11.0
Television in the HH		
Yes	383	42.1
No	527	57.9

5.2. Sexual history related to HIV/AIDS

The sexual history of the respondents is depicted in Table 2. Majority of the respondents 518 (56.9%) had engaged in sex. Among those who had sex, 46(8.9%) started while they were in the age group of 10-14, while 266(51.3%) in the age range of 15-19, 133 (27.5%) in the age range of 20-24, and 38 (7.3%) in the age range of 25-29 while the rest 2 (0.4%) in the age range of 30-35. Out of those who had sex, 33 (6.4%) did not report their specific age of starting sex. The mean (±SD) and median ages of the respondents were 18.3±3.65 and 18, ranging from10 to 35 years. Three hundred ninety subjects (75.3%) had sex during the past one year, out of which 21 (5.4%) had more than one partner, with maximum number of partners two. Of those who had sex in the past 12 months, 64(16.4%) used condoms The main reason for not using condom during sexual intercourse was attributed to have trust in one partner 281(86.9%), followed by disliking condom 21(6.4%), religious disapproval 16(4.9%), partner objection 6(1.8%) and unavailability of condoms 2(0.6%).

Table 2. Sexual history of the study subjects, Bahir Dar Town, December 2003.

Variable	Number	Percent
Had sex (n=910)		
Yes	518	56.9
No	392	43.1
Age sex started (n=518)		
10-14 years	46	8.9
15-19 years	266	51.3
20-24 years	133	25.7
25-29 years	38	7.3
30-35 years	2	0.4
Do not know	33	6.4
Sexual practices in the past one year (n=518)		
Yes	390	75.3
No	128	24.7
Number of sexual partner in the past one year (n=390)		
1	369	94.6
>1	21	5.4
Condom utilization in the past one year (n=390)		
Yes	64	16.4
No	326	83.6
Reasons for not using condoms (n=326)		
Trust in partner	281	86.2
Do not like	21	6.4
Religious disapproval	16	4.9
Partner objected	6	1.8
Not available	2	0.6

5.3 Knowledge related to transmission and prevention of HIV/AIDS, and misconceptions.

About 837 (92%) subjects believed that the mode of transmission is unprotected sex, 753 (82.7%) through infected instruments and 193(21.2%) from pregnant mother to child. Almost similar proportion of the respondents, 637(70%) and 580(67.7%) perceived that abstinence and being faithful to one partner are preventive methods from HIV/AIDS respectively. About 480(52.7%) of the respondents perceived correct and consistent use of condom as a preventive method of HIV/AIDS. Among the respondents, 178(19.6%) answered the three major modes of transmission of HIV infection and 265(29.1%) answered the three major of prevention methods of HIV/AIDS (Table 3).

Misconceptions related to HIV/AIDS were very low. Only 70(7.7%) had at least one misconception of HIV transmission. Few study subjects replied that HIV is transmissible by eggs of a hen that had swallowed a used condom and 19 (2.1%) of the respondents said that HIV can be transmitted by shaking hands. Moreover, 16 (1.8%) , 14 (1.5%), 11 (1.2%) and 7 (0.8%), have mentioned that the disease can be transmitted via mosquito's bite, living with PLWHA, using the same toilet and eating with HIV infected cases, respectively (Table 3).

Table 3 . Knowledge related to transmission and prevention of HIV/AIDS, and misconceptions, Bahir Dar Town, December 2003.

Variable	Frequency	Percent
Knowledge of modes of transmission of HIV/AIDS*		
Unprotected sex	837	92.0
Infected instruments	753	82.7
MTCT	193	21.2
Unsafe blood transfusions	73	19.0
Three major modes of transmission	178	19.6
Knowledge of preventive methods of HIV/AIDS*		
Abstinence	637	70.0
Being faithful to one partner	580	67.7
Correct and consistent use of condom	480	52.7
Three major methods of prevention	265	29.1
Misconceptions about transmission of HIV infection		
Eating eggs of a hen swallowed used condom	20	2.2
Shaking hands	19	2.1
Mosquito's bites	16	1.8
Living with PLWHA	14	1.5
Using the same toilet	11	1.2
Eating with PLWHA	7	0.8
At least one misconception	70	7.7

*- Total exceeds 100% due to multiple responses

5.4. Sources of information to increase knowledge related to HIV/AIDS

As indicated in Table 4 , the commonest sources of information that helped the study subjects to increase their HIV- related knowledge were radio 611 (67.0%) and television 389 (42.2%), followed by printed materials 302(33.2%), health professionals 203(22.3%), religious leaders 179(19.7%), family 168(18.3%), peer education 164(18.0%), Anti -AIDS clubs (AACs) 131(14.0%) and people living with HIV/AIDS (PLWHA) 113(12.4%).

Table 4 , Sources of information to increase knowledge of HIV/AIDS , Bahir Dar Town, December 2003.

Variable	Frequency	Percent
Sources helped to increase the knowledge*		
Radio	611	67.0
Television	389	42.2
Printed materials	302	33.2
Health professionals	203	22.3
Religious leaders	179	19.7
Family	168	18.3
Peers	164	18.0
AACs	131	14.0
PLWHA	113	12.4

*- Total exceeds 100% due to multiple responses

5.5 Perceptions, attitudes and practices related to HIV /AIDS

The majority of the study subjects, 560 (91.8%) have responded to have had great change of behavior towards HIV prevention, as the knowledge of previous HIV cases and deaths. Twenty nine (4.8%) indicated that they have somewhat a change, and few, 13 (2.1%) mentioned no change. Only, 8(1.3%), did not report their level of the behavior change. The perception of seriousness of HIV/AIDS infection (regarding themselves) was also very high. About 713 (78.4%) reported that it is serious, 89 (9.8%) had low perception of the seriousness of the disease, while 52(5.7%) had medium perception of the seriousness of the disease. Twelve (1.3%) reported the disease as not serious and 44(4.8%) reported nothing regarding the seriousness of the disease. On the other hand, most of the respondents, 583 (64.1%) had perception of increased unsafe sexual practices (among the population), while some of them, 129 (14.2%) reported that it is decreased than before, and 129(14.2%) reported that there is no change. Few of them, 69(7.5%) give any response (Table 5).

Table 5. Perceptions, attitudes and practices related to HIV/AIDS , Bahir Dar Town, December 2003.

Variable	Frequency	Percent
Perceived change of behavior of the respondents (n=610)		
Great change	560	91.8
Some change	29	4.8
No change	13	2.1
Do not know	8	1.3
Perceived perception of seriousness of HIV (n=910)		
Very high	713	78.4
Very low	89	9.8
Medium	52	5.7
None	12	1.3
Do not know	44	4.8
Perception of unsafe sexual practices (n=910)		
Increased	583	64.1
Decreased	129	14.2
No change	129	14.2
Do not know	69	7.5

5.6. Preference of settings and means of communication for information related to HIV/AIDS

The preference of settings and means of communication in order to obtain HIV/AIDS –related information is shown in Table 6. Most of the respondents, 596 (65.5%) preferred health institutions for adoption of positive behavioral change. Moreover, 268(29.5%), 211(23.2%), 180(19.8%), and 143(15.7%) preferred religious institutions, schools, homes and community – based organizations, respectively. Most of the study subjects 566 (62.2%) preferred drama while 477(52.4%) , 262(28.8%), 212(23.3%) and 181(19.9%) preferred group discussions, songs, news and speeches, respectively as best methods transferring information related to HIV/AIDS in order to bring about behavioral changes.

Table 6. Preference of settings and means of communication to get information related to HIV/AIDS, Bahir Dar Town, December 2003.

Variable	Frequency	Percent
Preference of settings to obtain information*		
Health institutions	596	65.5
Religious institutions	268	29.5
Schools	211	23.2
Home	180	19.8
Community -based organizations	143	15.7
Preference of means of communication*		
Dramas	566	62.2
Discussions	477	52.4
Songs	262	28.8
News	212	23.3
Speeches	181	19.9

*- Total exceeds 100% due to multiple responses

5.7. Knowledge, attitude and practice related to VCT

The attitudes and practices related to VCT are shown in Table 7. Most of the respondents 623 (68.5) have heard about VCT and 602(96.8%) had liked the service, whereas 14(2.2%) of them did not like it. Among those who liked the presence of the service, 184 (30.5%) had undergone VCT and 419 (69.5%) did not undergo VCT. The reasons for not undergoing VCT were that they believe that they couldn't get HIV/AIDS because of the trust in only one partner 215 (51.3%), due to fear of positive results 90(21.5%), due to fear of stigma and discrimination 78(18.6%), due to unaffordability 28(6.7%) and due to inaccessibility to the service 8(1.9%).

Table 7. Knowledge, attitude and practice related to VCT, Bahir Dar Town, December 2003.

Variable	Number	Percent
Heard about VCT (n=910)		
Yes	623	68.5
No	287	31.5
Do you like VCT? (n=623)		
Yes	603	96.8
No	14	2.2
Do not know	6	1.0
Undergone VCT (n=603)		
Yes	184	30.5
No	419	69.5
Reasons for not undergoing VCT (n=419)		
Trust in one partner	215	51.3
Fear of positive results	90	21.5
Fear of stigma and discrimination	78	18.6
Cost is high	28	6.7
Service is inaccessible	8	1.9

5.8. Behavior related substance abuse in the past one year, Bahir Dar Town, December 2003.

As indicated in Table 8, 35 (3.8%) subjects have substance abuse to khat chewing, 19 (2.0%) to alcohol drinking, 11 (1.2%) to cigarette smoking and 1(0.1%) to drug use in the past one year.

Table 8. Behavior related to substance abuse in the past one year, Bahir Dar Town, December 2003.

Variable	Number	Percent
Substance abuse (n=910)		
Khat chewing	35	3.8
Alcohol drinking	18	2.0
Cigarette smoking	11	1.2
Drug use **	1	0.1

**- Drug other than for treatment

5.9. Identified barriers to behavioral change towards HIV prevention

As it is indicated in Table 9, among the respondents who reported that unsafe sexual practices "increased" or "no change", 223 (31.3%) of the respondents reported that the barriers to HIV prevention related to low IEC interventions and 210 (29.5%) increase rate of unemployment. Two hundred four respondents (28.7%) associated the problems of behavioral change with increase in illegal video showing and khat houses, while others, 160 (22.5%) with low involvement of the community in the prevention and control of the disease. Few have attributed the problems of behavioral change to gender inequalities 87(12.2%), traditional malpractices 77(10.8%), stigma and discrimination 72(10.1%), inadequate number of recreational areas 58 (8.1%) and low involvement of religious institutions 50(7.0%).

Table 9. Identified barriers to behavioral change towards the prevention of HIV/AIDS, Bahir Dar Town, December 2003

Variable	Frequency*	Percent
Low IEC interventions	223	33.3
Unemployment	210	29.5
Increase in illegal video and khat houses	204	28.7
Low involvement of the community	160	22.5
Gender inequalities	87	12.2
Traditional malpractices	77	10.8
Stigma and discrimination	72	10.1
Inadequate number of recreational areas	58	8.1
Low involvement of the religious institutions	50	7.0

*- Total exceeds 100% due to multiple responses

5.10. Relations of socio-demographic variables and sexual practices in the past one year

The socio- demographic variables were compared with sexual practice as summarized in Table 10. Among the socio-demographic variables, sex, age and marital status were significantly associated with sexual practice. It was shown that males were sexually 2.30 times more active than females in the past 12 months (adjusted OR =2.30, 95% CI 1.38-3.85). Similarly, the younger age group 15-34 years had practiced sex in the past 12 months 2.30 times more than those in the age group of 35-49 years (adjusted OR =2.30, 95% CI 1.40-3.75). Moreover, the unmarried individuals were less likely to practice sex than the married individuals in the past 12 months (adjusted OR =0.21, 95% CI 0.12-0.35). The other socio –demographic variables did not show significant association with sexual practices under binary logistic regression.

Table 10 . Relations of socio-demographic variables and sexual practice in the past one year , Bahir DarTown, December 2003.

Variables	Sexual practice n=518		Crude OR(95% CI)	Adjusted OR (95% CI)
	n=390	n=128		
	Yes	**No**		
Sex				
Male	121	29	1.54(0.96-2.45)	2.30(1.38-3.85)***
Female	269	99		1
Age group				
15-34	269	79	1.38(0.91-2.09)	2.30(1.40-3.75)***
35-49	121	49		1
Religion				
Christian	362	117		1
Others	28	11	1.22(0.59-2.52)	0.64(0.28-1.45)
Ethnicity				
Amhara	375	123		1
Others	15	5	0.59(0.25-1.36)	1.48(0.61-3.60)
Marital status				
Single	74	53	0.33(0.22-0.51)	0.21(0.12-0.35)***
Married	316	75		1
Education				
Illiterate	107	37	0.93(0.60-1.45)	1.24(0.73-2.1)
Literate	283	97		1
Occupation				
Employed	341	107		1
Unemployed	49	21	1.37(0.78-2.38)	1.25(0.65-2.40)
Income				
<300 Birr	174	65	0.78(0.52-1.17)	0.83(0.53-1.29)
≥ 300 Birr	216	63		1
Has radio				
Yes	349	107		1
No	41	21	1.67(0.95-2.95)	0.53(0.28-1.02)
Has television				
Yes	156	46		1
No	234	82	1.19(0.79-1.80)	0.92(0.57-1.51)

***-Significantly associated

5.11. Relations of socio-demographic variables and number of sexual partners in the past one year

The socio- demographic variables were compared with the number of sexual partners as summarized in Table 11. Among the socio-demographic variables, sex; age and marital status were significantly associated with the number of sexual partners. Males were less likely to have one sexual partner in the past one year (adjusted OR = 0.43, 95% CI 0.26-0.72). Similarly, those who were in the age group of 35-49 years were less likely to have sexual partner than those in the age group of 15-34 years in the last one year (adjusted OR = 0.43, 95% CI 0.26-0.70). Moreover, those who are married were 4.92 times more to have one sexual partner than unmarried ones in the past one year (adjusted OR = 4.92, 95% C.I 2.90-8.35).The other socio–demographic variables did not show any significant association with number of sexual partner under binary logistic regression.

Table 11. Relations of socio-demographic variables and number of sexual partners in the past one year, Bahir DarTown, December 2003.

Variables		Only one partner n=369	More than one partner n =21	Crude OR(95% CI)	Adjusted OR (95% CI)
	Male	115	6		1
Sex	Female	254	15	1.13(0.43-2.99)	0.43(0.26-0.72)***
Age group	15-34	254	15		1
	35-49	115	6	0.88(0.33-2.33)	0.43(0.26-0.70)***
Religion	Christian	342	20		1
	Others	27	1	0.63(0.82-4.90)	0.71(0.30-1.66)
Ethnicity	Amhara	336	20		1
	Others	33	1	0.51(0.67-3.92)	0.88(0.27-2.84)
Marital status	Single	63	12		1
	Married	306	9	0.15(0.06-0.38)	4.92(2.90-8.35)***
Educational status	Illiterate	98	10		1
	Literate	271	11	0.40(0.16-0.97)	0.81 (0.48-1.37)
Occupation	Employed	333	7	18.5(7.01-48.82)	1.26(0.66-2.41)
	Unemployed	36	14		1
Monthly income	<300 Birr	163	11	0.72(0.30-1.74)	1.22(0.78-1.90)
	≥300 Birr	206	10		1
Has radio	Yes	329	20		1
	No	40	1	0.41(0.05-3.12)	0.54(0.28-1.03)
Has television	Yes	153	2		1
	No	216	19	6.72 (1.54-29.32)	0.90(0.55-1.47)

***-Significantly associated

5.12 Relations of socio – demographic variables and condom utilization in the past one year

The socio- demographic variables were compared with condom utilization as summarized in Table 12. Among the socio-demographic variables, sex, marital status, occupation and having radio were statistically associated with condom utilization. It was shown that males utilize condoms about 2.58 times more than females (adjusted OR= 2.58, 95% C.I 1.26-5.28). Moreover, unmarried individuals utilize condoms about 8.79 times more than the married individuals (adjusted OR=8.79, 95% C.I 4.34-17.80). In addition, those who are employed were less likely to utilize condoms during sexual activities (adjusted OR=0.30, 95% C.I 0.13-0.70), while those who had radio at their home had about 9.52 times chance of utilizing condoms than those without radio (adjusted OR=9.52, 95% C.I 1.16-78.38). Other socio –demographic variables did not show any significant association with condom utilization under binary logistic regression.

Table 12. Relations of socio-demographic variables and condom utilization in the past one year, Bahir Town, December 2003.

Variables		Use condom		Crude OR (95% CI)	Adjusted OR (95% CI)
		Yes n =64	No n=326		
Sex	Male	30	91	2.28 (1.32-3.94)	2.58(1.26-5.28)***
	Female	34	235		1
Age group	15-34	52	217	2.18 (1.12-4.25)	1.44(0.63-3.27)
	35-49	12	109		1
Religion	Christian	59	303		1
	Others	5	23	0.90(0.33-2.45)	1.42(0.41-4.90)
Ethnicity	Amhara	57	299		1
	Others	7	27	0.74(0.30-1.78)	2.04(0.71-5.82)
Marital status	Single	40	35	13.86(7.49-25.65)	8.79(4.34-17.80)***
	Married	24	291		1
Educational status	Illiterate	14	94	0.69(0.37-1.31)	1.69(0.72-3.99)
	Literate	50	232		1
Occupation	Employed	40	300	0.14(0.08-0.28)	0.30(0.13-0.70)***
	Unemployed	24	26		1
Monthly income	<300 Birr	32	142		1
	≥300 Birr	32	184	1.30(0.76-2.2.2)	0.58(0.29-1.15)
Has radio	Yes	63	286	8.81(1.19-65.3)	9.52(1.16-78.38)***
	No	1	40		1
Has television	Yes	28	127	1.22(0.71-2.10)	1.25(0.60-2.60)
	No	36	199		1

***-Significantly associated

RESULTS OF FOCUS GROUP DISCUSSION

A total of five focus group discussions (FGD) each consisting 10 discussants were conducted. The groups were categorized mainly based on their sex, marital status and age. The main objective of the FGD was to substantiate the quantitative survey and to obtain in-depth sources of information related to HIV/AIDS. The groups were composed of unmarried males and females, married males and females as well as religious leaders. Based on the discussion guideline, the result of the FGD is presented as follows.

1) Means of transmission and prevention of HIV/AIDS

Majority of the respondents reported that the knowledge of HIV transmission is adequate among the population but still there are some misconceptions such as transmission of the virus through casual contacts. Their attitudes towards the prevention means of HIV/AIDS including the VCT services were good. They preferred abstinence until marriage and being faithful to one partner. Condom was mentioned as an option when the above two preventive methods do not work but the religious group condemned condom utilization, since it is against their religion. They reported that "condom should not be recommended as an alternative means of HIV prevention as there is about 10% risk of contracting the virus during sexual intercourse."

2) Barriers to behavioral change related to HIV/AIDS prevention

Most of the respondents said that there is still low behavioral change towards HIV preventive methods as number of HIV cases is alarmingly increasing from year to year. This is mainly as a result of lack of open discussion among the families, adoption of western culture among the youth, low perception about the seriousness of the HIV/AIDS, inappropriate methodologies in IEC works, poor school education (lack of civics and ethics education), poverty, pornographic films, existence of stigma and discrimination attached to HIV/AIDS, substance abuse, increase number of illegal video showing houses and night clubs, presence of some misconceptions, lack of job opportunities and low awareness of VCT services.

3) Impacts of socio- demographic factors on behavioral change

A large number of the participants reported that most of the socio-demographic variables have either positive or negative impacts on behavioral change directly or indirectly. For instance, "when sex is considered as a factor, most girls in the town wear clothes that do not cover the provocative parts of their body, and this arouses the males to perform unprotected and unintended sexual practices." On the other hand, the discussants reported that "many women are less empowered and disadvantaged and thus, are forced to have more than one sexual partner mainly due to economic constraints. This makes them less likely to show positive behavioral change towards HIV prevention." Moreover, they reported that males especially the youths are more likely to perform unsafe sexual practices than females mostly due to lack of job opportunities and low number recreational facilities.

Regarding the age, most of the discussants indicated that the problem of behavioral change is mostly observed among youths than the adults because, majority of them are more likely to practice unsafe sexual activities though they have sufficient knowledge about transmission and prevention of HIV/AIDS. Majority of the discussants reported that religion does not have an impact on behavioral change but few of the discussants reported that religion can have some impacts on behavioral change. For instance, some of the Orthodox followers do not condemn alcohol drinking that will predispose them to unsafe sexual practices. Muslims were considered to show good behavioral change followed by Protestants, as their religions prohibit alcohol drinking. All groups reported that ethnicity does not have impact on behavioral change related to HIV/AIDS. Concerning the marital status, majority of the discussants reported that the problem of behavioral change is more prevalent among the unmarried and divorced individuals than the married ones. On the other hand, few discussants reported that being married does not imply positive behavioral change in some cases especially when the married individuals are separated due to jobs. Some of the Muslims in the religious group have reported that " having more than one wife (polygamy) among the Muslims does not imply performing unsafe sexual practices , but rather it is means of keeping oneself away from extra- marital sexual intercourse predisposing to HIV infection." When education is taken into account, some of the discussants have reported that "educated people are more likely to change their behavior than the uneducated ones, provided that they had obtained adequate information related to HIV/AIDS. On the other hand, some of the discussants reported that "having better education sometimes does not bring about sustainable behavioral change towards HIV prevention as some of the educated people are being involved in risky behaviors, and eventually victimized and pass away." This implies as they said, "individual educational status does not matter much in case of HIV/AIDS, but rather

what matters is individuals' thinking and decision." Concerning the occupational status, most of the discussants have mentioned that field workers and military personnel are less likely to have positive behavioral change towards the prevention of HIV infection." Regarding the economic status, majority of the discussants have reported that "when low economic status has a negative impact on behavior change for women, being at a better economic status sometimes has negative impacts on behavior of males because some rich males are forced to have unsafe sexual practices with poor women such as commercial sex workers for the exchange of money." Generally, as discussants reported, "females are more dependent on males for economic reasons, and thus, are vulnerable to have unprotected sex with rich men." Almost all the respondents reported, residence has an impact on behavioral change related to HIV prevention. They have indicated that "individuals residing in urban areas are more likely to achieve positive behavioral change since they are more accessible to information." On the other hand, few discussants said "though urban residents especially the youths have more access to adequate information about HIV/AIDS, lack of job opportunities and recreational areas as well as some environmental factors like chat and video showing houses lead them to perform unsafe sexual practices."

4) Important sources of information for behavioral change

The majority of the discussants have mentioned that radio is the most preferable media for bringing positive behavioral change towards HIV prevention. Television and print media were also mentioned as the commonest sources of information next to radio. Moreover, health professionals, religious leaders and parents were considered to be the most important sources of information.

5) Impacts of IEC on behavior related to HIV prevention

Few of the participants have indicated that some positive behavior changes have been obtained like; being faithful to one partner, condom use and care infected instruments. But some media communication lacks clarity. For instance, the information through radio saying "value your life" is not clear for some individuals since its meaning is not well- elaborated in local language. Moreover, some media communication like television displays emaciated cases of AIDS, which create stressful conditions among the population predisposing to increased level of stigma and discrimination among the population. Generally, all the participants of the FGD reported that dances, pornographic films and advertisements through media are sex stimulating and have negative impacts on behavioral change towards the prevention of HIV/AIDS among the population.

6. Summary of Suggestions by the Focus Group discussants

The five groups of the FGD have suggested the following recommendations in order to bring about positive behavioral change towards HIV prevention.

Majority of the groups suggested the followings.

- Improving IEC activities involving religious institutions
- Creation of job opportunities especially for the youth
- Reducing substance abuse leading to unsafe sexual practices
- Abstinence from sex until marriage
- Being faithful to one partner after marriage

- Restriction of sex stimulating dances, pornographic films, music and advertisements that initiate the youth to practice unprotected sex

Most of the groups suggested the followings.

- Increasing community participation in bringing about positive behavioral change
- Taking legal actions against illegal video houses and night clubs
- Incorporating ethics and civics education in the school curricula
- Girls should be taught to dress decently by their families in particular and the community in general
- Discouraging harmful traditional malpractices like early marriage, tonsillectomy , tooth extraction and tattooing by the community and other concerned bodies
- Increasing the number of recreational facilities should get due attention by the government.

Some of the groups suggested the followings.

- Improving care of HIV patients both at health institutions and home level
- Wearing rings as a "promise" not to perform premarital sexual intercourse
- Increasing number of Anti-AIDS Clubs (AACs)
- Applying experience of other countries like Uganda in bringing bout positive behavioral change towards the prevention of HIV/AIDS.

6. DISCUSSION

The study has obtained important information in assessing some barriers to behavioral change towards the prevention of HIV/AIDS. It has tried to enroll those who are 15-49 years with the assumption that wider ranges of sexually active segment of the population were targeted. Though the data collection was conducted before, during and after the working hours as well as at the weekends, the proportion of male respondents was unfortunately lower than that of female respondents as the males were not available at their home during the time of the data collection.

Using binary logistic regression, the socio- demographic variables were compared with the three selected dependent variables related to behavior, namely, sexual practice, number of sexual partners and condom utilization in the past one year. Some of the socio-demographic variables have shown significant associations with the three outcome variables. For instance, sex, age and marital status were significantly associated with sexual practices and number of sexual partner in past one partner. Moreover, sex, marital status, occupation and having radio were significantly associated with condom utilization in the past one year. A community-based survey conducted in Uganda (26) has revealed that sex and education influence change of behavior in the era of AIDS. This is perhaps because the males and educated individuals have more access to information that enables them to change their behavior before females and uneducated do so. In the same study, age was observed to influence the behavioral change (26). A study conducted in northern Ethiopia among the CSWs (36) has indicated that higher condom use rate was observed as the level of educational status increased from lower to higher level. Another KAP study conducted in Amahra Region (37) had also obtained similar results. In the quantitative data of the current study indicated education did not show significant association the three outcome

variables but the focus group discussants reported that it can influence on behavior related to HIV/AIDS. Religion also did not show any significant difference on behavioral change towards the prevention of HIV/AIDS under the binary logistic regression, but some of the focus group discussants reported that it can influence the behavior. The relationship of the socio-demographic variables with the three outcome variables implies that some socio-demographic factors have influence on behavioral change towards the prevention of HIV/AIDS.

AIDS –risk behaviors remain common in many countries. Some studies on HIV- risk behaviors showed that, despite adequate knowledge about HIV/AIDS, higher proportion of people especially the youth continue to experiment high risk behaviors. Of the behaviors known to place individuals at risk of HIV infection, having multiple sexual partners is probably the key concern in sub-Saharan Africa .Similarly, history of multiple sexual partner was the main risk factor for HIV infection among AIDS patient in Ethiopia (14). In the current study, awareness of transmission and prevention of HIV/AIDS was high but it was reported by most of the respondents and almost all of the FGD discussants that unsafe sexual practice among the population is increasing. The BSS (30) study has revealed that though the majority of the population know that abstinence and monogamy are protective against HIV infection, most of the population had premarital sex and more than one sexual partner in the past one year. Previous studies have indicated that though people understood the risk and preventive methods and wanted to change, subsequent behavioral change did not take place (14). A recent analysis of decline in HIV prevalence in Uganda indicates that teaching about abstinence among youths and monogamy in combination with condom use was the best preventive model in reducing AIDS rates in Africa's worst stricken countries by 80% (38).

In the current study, the percentage of those respondents practicing sex in the past year was 75.3%, from which only 94.6% have reported to have only one partner, while about 5.4% had more than one partner. The previous study by BSS (30) has demonstrated that almost a third of the sexually active segment of the adult population in the past 12 months was reported to have more than one partner. The current study has demonstrated decrease in exposure to multiple sexual partners that may imply some change of behavior towards the prevention of HIV/AIDS but this finding can be affected by bias related to social desirability.

This study showed that the minimum age of sexual commencement was 10 years indicating that risky behavior exposing to HIV/AIDS is still prevailing among the population (39). The community- based study conducted in western Ethiopia (Gambella) (32) has revealed that the earliest age of sexual contact was 11 years. The previous study (17) has shown that there was increase in age of starting sex in some African countries which implied some change of behavior.

Condom utilization rate was low (16.4%) when compared with sexually active individuals participated in this study. The reason for not using it was mainly attributed to the fact that most of the partners trust each other. This finding is consistent with the finding of BSS (30) demonstrating 13% of unprotected sex in the past one year. Another study (17) has indicated that though young people are sexually active at younger age, few of them use condom. The possible logical explanation was that as age increases the frequency of exposure to sexual act will increase, and thus the likelihood of using condom will also increase (17). The community-based study carried out in Gambella (32) has indicated that 39.6% of the respondents committed

unprotected sex with sexual partners. Generally, the current study has revealed that more male respondents (24.8%) use condom than females (12.6%).This is consistent with other studies, where there is relatively higher condom utilization among males than females (17). The low level of condom utilization due to trust in one partner can be considered as positive behavioral change towards the utilization but it may also be influenced by bias. The study done in Gambella (32) has shown that condom use was low among the population despite there is adequate knowledge. Marriage was the common reason for not using condom (32). All the FGD discussants of the current study except the religious group supported the use of condom as an alternative means. The religious group condemned the use of condom as it is against their religions. The widely advertised government ABC (abstinence, being faithful and condom use) is a guide of the current prevention programs but religious institutions remain largely opposed to condom use. On the other hand, a pilot prevention study (38) of 71 religious leaders in Jimma Zone, south west Ethiopia, has reported positive behavioral change after interventions, including reduced alcohol consumption, promiscuity and use of sharp instruments as well as more open discussion about HIV/AIDS.

Regarding the knowledge related to HIV/AIDS, almost all of the respondents (99%) have heard about HIV and most of them knew at least one mode transmission and prevention method of HIV/AIDS. Moreover, about 70% of the respondents mentioned that the best preventive method of HIV/AIDS is abstinence followed by being faithful to one partner (67.7%). Condom use was indicated as an option by 52.7% of the respondents. The KAP study conducted in northern Ethiopia (37) has indicated that 64.7% of the respondents preferred being faithful to one partner, 39.1% condom use and 11.2% abstinence, as preventive means of HIV/AIDS. Among the

respondents of the current study, only 178(19.6%) could answer the three major modes of transmission of HIV/AIDS while 265 (29.1%) answer the three major methods of prevention of HIV/AIDS indicating that the level of comprehensive knowledge related to HIV/AIDS is still insufficient. The BSS (30) has indicated that almost half of the respondents were unable to name the three preventive methods of HIV/AIDS.

When the knowledge of condom (52.7%) as preventive method for HIV infection and the utilization (16.4%) were compared, there was a discrepancy between knowledge and condom utilization. This finding is also consistent with study conducted in Gambella (32) that has revealed the difference between actual condom utilization (39.6%) and the knowledge of condom as a preventive method (76.5%).On the other hand, the BSS (30) has found out that most of the adult population practice unprotected sex despite the high level of knowledge pertaining to transmission and preventive methods of HIV/AIDS.

The sources of information that helped to increase knowledge in order of their importance were radio, television and printed materials. In the BSS (30), the type of media preferred was similar, though their order of preference was inconsistent to each other. Moreover, it was indicated that knowledge about preventive methods of HIV/AIDS and exposure to media was directly proportional to each other. One study conducted in Addis Ababa (40) has obtained similar results.

The current study has also indicated that misconceptions related to modes of transmission of HIV/AIDS were low , the most prevalent one being eating eggs (2.2%) followed by shaking

hand (2.1%). Among the respondents, 70 subjects have at least one misconception related to transmission of HIV/AIDS. The BSS (30) has indicated that misconceptions among the population were high though its prevalence among the urban residents was lower than that of rural community.

Majority of the respondents and the FGD discussants of the current study reported that there had favorable attitudes towards the three major the preventive methods of HIV/AIDS. The community–based survey conducted in Gambella (32), has demonstrated that many study subjects had favorable attitudes towards the prevention of HIV/AIDS.

Most of the respondents (65.5%) preferred health institutions in order to adopt positive behavioral change. About 62.2% and 52.0 % of the respondents preferred drama and group discussions, respectively, to bring about significant behavioral change. This is finding is consistent with the result of the study done in Addis Ababa (34), though the study subjects were from different sources.

About 91.8% of the respondents knowing HIV cases or deaths had shown great change of behavior towards the prevention of HIV/AIDS. This result is consistent with study conducted in Uganda which has revealed that the number of AIDS deaths known to a respondent may be influencing the change of behavior related to HIV/AIDS. This finding agrees with the hypothesis that human beings need the rude shock of many deaths in order to awaken their senses and change their behavior (26).The important role of emotions as a valid form of human experience, which may trigger the practice of preventive health behaviors, is often underestimated,

understated, and overlooked. For instance, witnessing the death of a close friend from AIDS, and seeing a grief of his parents, infected widow, and child, can serve as a more powerful trigger to adopting a prevention behavior than rationally – structured media messages promoting condom utilization. The majority of the respondents (78.4%) and the FGD discussants of the current study have reported to have high risk- perception of HIV though some of the segment of the population is still committing unsafe sexual practices. The BSS (30) had shown that the risk-perception related to HIV was low amongst the target groups.

Pertaining to knowledge, attitude and practice related to VCT as one of a preventive method from HIV/AIDS, most of the study subjects (68.5%) had heard about VCT, out of which 96.8% had favorable attitudes towards the service. Among those with favorable attitudes, 30.5% had undergone VCT. The others (69.5%) didn't take the service mainly owing to trust in one partner and fear of positive results. Few of them (18.6%) attributed the problem of not undergoing VCT to stigma and discrimination attached to HIV/AIDS. This finding is consistent with the result of BSS (30), but the magnitude of those who undergone VCT in BSS (30) study was much less (<10%) than the result obtained in the current study. This might be attributed to the increase in awareness and availability of VCT service from year to year. A study conducted in Ugandan community had demonstrated that over 70% of respondents, all of whom were aware of the AIDS, were willing to go for HIV testing to know their sero-status. Perhaps those who are willing to test want to seek early treatment if found sero-positive and stop transmission of the infection to their partners. Such an attitude would be positive to public health (26).

Substance abuse was assessed because of its potential impacts in predisposing individuals to the practice of unprotected sex. In this study, the proportion of substance abuse among the respondents in the past one year was low. Khat chewing (3.8%) and alcohol drinking (2.0%) were identified as substances to which very few respondents were addicted. The BSS (30) has also indicated that among adult population, very low level of drug and alcohol use was reported. The FGD discussants of the current study have reported that though the rate of alcohol drinking and khat chewing is currently low among the population, some youths use the substances when they are unemployed and there are inadequate recreational facilities.

The majority of the respondents (64.1%) have reported that unsafe sexual practices like having more than one partner, unprotected sex and early commencement of sexual practice among the population is still very high, though majority of the population have adequate knowledge of some modes of transmission and prevention of HIV/AIDS. This finding was supported by almost all the focus group discussants of the current study. Some subjects (14.8%) have indicated that there is a decrease in unsafe sexual practice, since majority of the population became faithful to one partner and some use condom as an alternative means. Previous studies have indicated that there is increase in age of the first sexual intercourse and condom utilization among the population as the result of IEC interventions, indicating that there is progress in changing sexual risky behaviors (17).

Most of the identified barriers were the problems related to communication, socio-economic status, cultures and gender relations. These are some of components of contextual domains of UNAIDS's communication framework. The framework premised on the notion that past failures

of preventive health intervention program in developing countries have been wrongly blamed on the individual , disregarding the context that shapes the individual. For instance, whether individual can get HIV test , use condoms, be monogamous, or use clean needles is often impacted by cultural , economic, social ,and political factors over which the individual may exercise little control (41).

The identified barriers towards the prevention are mostly attributed to low IEC interventions. IEC is a crucial and essential element in society's endeavors against HIV transmission. The intent of IEC is to influence the cognitive, the affective and the psychomotor domains of the receiver. These become a reality when the source is credible and the message is understandable, appropriate, accessible and in line with expectation and interest of the audience. However, none of this information source and messages did much. In addition to the illegal video showing houses and night clubs, the mass media is criticized for depiction of contradicting and conflicting messages that arouse sexual feelings through portraying pornographic films and dances. Moreover, the advertisement of condoms by the mass media is presented without reference to other prevention alternatives and devoid of usage instruction. This may distort youth perception resulting in faulty decision which can be considered as one of the perceived barriers to behavioral change (34).

The other barrier was unemployment .The previous study has indicated that the primary cause for spread of HIV infection in Africa is poverty. Poverty, characterized by its crippling effects of economic destitution, crime, drugs, and family chaos, powerfully influences HIV-related attitudes and coping strategies. Economic factors also influence women's relationships and

choices, which can place them in increased risk of contracting HIV/AIDS. Economic inequalities leave women dependent on men for economic reasons and expose them to HIV infection (6).

The other identified barrier to behavioral change was low involvement of the community in the fight against HIV/AIDS. Though several organizations were operating in HIV/AIDS programs, little is known about the progress and effectiveness of CBOs due to the recency of most programs and lack of monitoring and evaluation mechanisms. There is increasing evidence from Uganda, Thailand, Senegal and other countries with successful HIV/AIDS prevention programs that a diverse spectrum of community – based participation in conjunction with high level of political commitment is the most effective approach in controlling the epidemic (38).

It is well-known that traditional malpractices like circumcision, uvulectomy, tonsillectomy, and tattooing and tooth extraction also expose to HIV infection. Both the quantitative and qualitative data of the current study indicated that the harmful traditional practices prevailing in the region are one of the barriers to the prevention of HIV/AIDS. The previous study conducted in the region has indicated that the community is aware of the harmful traditional practices (37).

The existence of stigma and discrimination stands out as a significant challenge to the prevention and control of HIV/AIDS in Ethiopia. Results of BSS (30) have shown high level of stigma and discrimination related to HIV/AIDS. It has indicated that the majority of respondents showed at least one stigmatizing attitude towards people living with HIV/AIDS and presence of the high level of stigma and discrimination facilitates the spread of HIV/AIDS and jeopardizes the

prevention efforts (30). The finding of current study is consistent with results of BSS (30) and previous study conducted in Amhara Region (37).

Religious leaders are becoming the most preferred sources of information in the era of HIV epidemic. It has been reported that they are doing good work because of their source credibility and message believability (34).On the other hand, the current study has indicated that there was low involvement of the religious institutions especially in media communication related to prevention and control of HIV/AIDS.

Strengths and limitations of the study

Strengths

- Gives baseline information for further study
- Use of both quantitative and qualitative methods of data collection
- High response rate

Limitations

- Bias related to social desirability
- Lack of standardized questionnaire related to this specific topic

7. CONCLUSION

The findings of the current study have indicated that individuals' behavior related to HIV/AIDS can be influenced by some socio- demographic characteristics like sex, age, marital status, occupation and exposure to media. Majority of the respondents had awareness of HIV/AIDS and

most of them could answer at least one means of transmission and prevention of HIV/AIDS but the proportion of respondents who could answer the three major means of transmission and prevention of HIV infection was not significant. Moreover, the study showed that there is still a gap between knowledge about HIV/AIDS and behavioral change towards the prevention of the disease.

In this study, early age of sexual commencement was one of the risky behaviors predisposing to HIV/AIDS. There was decrease in having multi–sexual partners and utilizing condom, when compared with the previous studies. The rationale for decrease in both conditions was trust in one partner but these findings can be influenced by biases related to social desirability and some sensitive interview questions. On the other hand, some of the respondents and the majority FGD discussants have reported that the unsafe sexual practices among the population are still increasing, despite some knowledge related to HIV/AIDS. The perceived barriers to the behavioral change were mainly related to communication, cultures, socio- economic conditions, and gender relations.

The major sources of information pertaining to HIV/AIDS were the mass media out of which radio was cited as a commonest source of information related to HIV/AIDS prevention and control. The preferred settings to achieve the desired behavioral change were health institutions and religious organizations. Dramas and group discussions were the two major means of communications preferred to achieve positive behavioral change. On the other hand, IEC on HIV/AIDS was criticized for not addressing the needs, expectations and concerns of the population in general and the youth in particular.

Own risk-perception of the respondents concerning HIV/AIDS was high, though they reported that some segment of the population especially the youth is still committing unsafe sexual practices. The attitude of the most the respondents and FGD discussants towards the prevention of HIV/AIDS including the VCT services was favorable.

The level of addiction to different substances exposing to unsafe sexual practices was lower among the respondents when compared with the previous studies. Misconceptions related to HIV transmission among the respondents exist but was also lower than the findings of the previous studies. These findings may indicate some behavioral change but may also be affected by biases related to social desirability and sensitive nature of some interview questions.

Generally, the perceived barriers to behavioral change towards the prevention of HIV/AIDS among the urban population are low level of comprehensive knowledge about the transmission and prevention of HIV/AIDS and factors related to communication, cultures, socio-economic status and gender relations. It was demonstrated that behavioral change towards the prevention of HIV/AIDS can be influenced by some socio-demographic characteristics of the population.

8. RECOMMENDATIONS

Based on the findings of the study, the following recommendations were forwarded.

1. The current IEC strategy needs to be evaluated with a view to adapting the new strategy for behavioral change communication that would enhance sustainable behavioral change.

2. Strengthening the political commitment and the participation of community and the religious leaders to decrease the stigma and discrimination attached to HIV/AIDS.

3. Government and non-governmental organizations need to promote the establishment of recreational facilities and focus on creation of job opportunities for the youths.

4. Women empowerment should get due attention by the government and the non-governmental organizations in order to bring about the desired behavioral change.
5. Strengthening the community and multi-sectoral HIV-related interventions at all levels.
6. Increasing awareness and expansion of VCT services to promote sustainable behavioral change among the population.
7. Strengthening legislative actions directed to control khat and illegal video showing houses.
8. Further studies related to barriers to behavioral change interventions.

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ANNEX 1. STRUCTURED INTERVIEW QUESTIONNAIRE FOR THE QUANTITATIVE STUDY

1. Guideline for Interviewers

When you reach the selected household, introduce yourself as coming from Amhara Region Health Bureau after greeting the person you meet first. Then, explain the purpose of the study for the respondent by saying that:

"The reason why I came here is to ask you some questions related to health. The purpose of this interview is to conduct scientific research that may help us to identify barriers to behavioral change towards the prevention of HIV/AIDS and forward some recommendations to concerned bodies that will help to improve the existing efforts in the area of HIV/AIDS prevention".

After the explanation, identify the presence of any household members aged 15-49 years of age. If they are more than one person in the specified age group, give number for each one and then select one individual by lottery method. If there is no individual in the specified age group, thank and go to the next household.

2. Informed Consent

Read the following paragraph for the selected person.

"To conduct our study, I would like to ask you some questions which may take about 30 minutes. As your participation is very important to the outcome of the study, we kindly request you to give us your sincere and truthful answer. All the information that you and other respondents are going to provide us will remain confidential and you don't need to mention your name."

Are you willing to participate in the interview?

Yes, _____ (continue the interview if the respondent says, "Yes")

No, _____ (Thank and stop here if respondent says "No")

Signature_____ Date_____

(Signature of the interviewer certifying that consent has been obtained verbally)

Instruction: - The following are interview questions in order to identify barriers to behavioral change towards the prevention of HIV/AIDS. Please give your honest and truthful answer to

each question from the indicated choices.

Part 1. Socio- demographic variables

No	Questions	Alternative responses	Skip to
Q101	Sex of the respondent	1. Male 2. Female	
Q102	What is your age in years?	1. _____(Months, years)	
Q103	What is your religion?	1. Orthodox 2. Catholic 3. Protestant 4. Muslim 5. No religion 6. Others (specify)_____	
Q104	To which ethnic group do you belong?	1. Amhara 2. Agaw 3. Tigre 4. Gurage 5. Oromo 6. Others (specify)_____	
Q105	What is your current marital status?	1.Single 2. Married 3. Divorced 4. Separated 5. Widowed	
Q106	What is the highest level of school you have completed?	1. Can not read and write 2. Can read and write 3. Grade 1-6 4. Grade 7-12 5. Diploma and above 6. Others (specify)_____	

Q107	What is your current occupational status?	1. Civil servant 2. Housewife 3. Trader 4. Private employee 5. Student 6.Commercial sex worker 7. Daily laborer 8. Others_____	
Q108	What is your income per month?	1. Less than 100 Birr 2. 100-199 Birr 3. 200-299 Birr 4. 300 Birr and above 5. Refused to answer 88. I do not know 99. No response	
Q109	Is there radio in your household?	1. Yes 2. No	
Q110	Is there television in your household?	1. Yes 2. No	

Part 2. Sexual behavior related to HIV prevention

No	Questions	Alternative responses	Skip to
Q201	Have you ever had sexual intercourse?	1. Yes 2. No	→Q301
Q202	At what age did you first have sexual intercourse?	1. ----------years 88. I do not know 99. No response	
Q203	Have you had sexual intercourse in the last 12 months?	1. Yes 2. No 88. I do not know 99. No response	→301
Q204	If your response to Q203 is "Yes" how many sexual partners did you have in the last 12 months?	1. Only one partner 2. More than one partner 88. I do not know 99. No response	→Q207
Q205	How many of them were regular partners? (Someone with whom you have been having sex for at least 3 months)	1._____ 88. I do not know 99. No response	
Q206	How many of them were non-regular partners? (Someone with whom you have been having sex for less than 3 months)	1._____ 88. I do not know 99. No response	
Q207	In the sexual intercourse of the past 12 months, did you and your partner(s) use condom.	1. Yes 2. No 88. I do not know 99. No response	→Q209
Q208	If your response to Q207 is "Yes", at what frequency did you and your partner (s), use condoms?	1. Every time 2. Sometimes 3. Rarely 88. I do not know 99. No response	
Q209	Why did not you and your partner (s) use condoms during sexual intercourse?	1. Not available 2. Partner objected 3. Too expensive	

	(Circle all that apply)	4. Religious disapproval 5. Do not like them 6. Have trust in the partner 7.Others (specify)_____ 88.I do not know	

Part 3. Communication related to HIV prevention

No	**Questions**	**Alternative responses**	**Skip to**
Q301	Have you ever heard about HIV/AIDS on the radio?	1. Yes 2. No	→Q303
Q302	If your response to Q301 is "Yes", how often have you listened to the radio during the last four weeks?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks 4. At least once in four weeks 5. Others (specify)_____	
Q303	Have you ever watched about HIV/AIDS on the television?	1. Yes 2. No	→Q305
Q304	If your response to Q303 is "Yes", how often have you watched to the television during the last four weeks?	1. At least once a week 2. At once in two weeks 3. At once in three weeks 4. At once in four weeks 5. Others (specify)_____	
Q305	During the last four months, have read any printed materials related to HIV/AIDS? /printed materials refer to newspaper, magazines and leaflets and posters /	1. Yes 2. No	

Part 4. Knowledge, attitudes and practices related to HIV prevention

No	Questions	Alternative responses	Skip to
Q401	When have you first heard about HIV/AIDS?	1. Never heard 2. Since one year 3. Since 2 yeas 4. Since 3 years 5. Since 4 years 6. Since 5 years 7. Before 5 years 88. I do not know 99. No response	
Q402	Have learned anything about HIV/AIDS in the last 12 months?	1. Yes 2. No	→Q404
Q403	If you response to Q402 is "***Yes***", what did you learn? **(Circle all that apply)**	1. Modes of transmission of HIV 2. Preventive methods of HIV 3. Impacts of HIV/AIDS 4.Others (specify)_____	
Q404	Which source(s) of information helped you to increase your knowledge related to HIV/AIDS? **(Circle all that apply)**	1. Family 2. Peers 3. Radio 4. Television 5. Leaflets 6. Posters 7. Newspaper 8. Religious leaders 9. Health professionals 10. Teachers 11. Anti-AIDS clubs 12. PLWHA 13. Others (specify)_____ 88. I do not know	

Q405	What are the modes of transmission of HIV/AIDS? **(Circle all that apply)**	1. Unprotected sex 2. Contaminated instruments 3. From mother to child 4. Shaking hand with PLWHA 5. Eating with PLWHA 6. Mosquito's bites 7. Unscreened blood transfusion 8. Living with PLWHA in the same house 9. Eating eggs laid by a chicken that has swallowed used condoms 10. Using the same toilet with PLWHA 11.Others (specify)_____ 88. I do not know	
Q406	What are the preventive methods of HIV/AIDS? **(Circle all that apply)**	1. Abstinence 2. Being faithful to one's partner 3. Correct and consistent use of condom 4. Using infected instruments 5. Having good nutrition 6. Voluntary counseling & testing 7.Others (specify)_____ 88. I do not know	
Q407	Did the information you received about HIV/AIDS changed your previous attitudes?	1. Yes 2. No	
Q408	To bring positive behavioral change towards HIV prevention, which setting (s) do you prefer to obtain information related to HIV/AIDS? **(Circle all that apply)**	1. Health institutions 2. Schools 3. Religious organizations 4. Community-based organizations 5. At home level 6.Others (specify)_____	
Q409	Did the information you	1. Yes	

	obtain about HIV/ AIDS improve your practice?	2. No	
Q410	How should information related HIV/AIDS be communicated in order to bring about significant behavioral change? **(Circle all that apply)**	1. Songs 2. Drama 3. News 4. Speeches 5. Discussions 6.) Others (specify)_____	
Q411	Do you know people who are infected with HIV or have died of AIDS?	1. Yes 2. No	→Q413
Q412	If your response to Q411 is "Yes", how do you rate the positive behavioral change you have noticed due to the infection or deaths?	1. Great change 2. Some change 3. No change 88. I do not know 99. No response	
Q413	Do you think that a healthy –looking person can be infected with HIV?	1. Yes 2. No	
Q414	How much do you think is your chance of contracting HIV infection with one unprotected sexual intercourse?	1. Very high 2. Very low 3. Medium 4. I do not think I will contract HIV 88. I do not know 99. No response	
Q415	Have you heard about VCT?	1. Yes 2. No	→Q419
Q416	If your answer to 415 is "Yes" what is your attitude towards the VCT service?	1. Good 2. Bad 88. I do not know 99. No response	
Q417	If your response to Q416 is ***good***, have you undergone	1. Yes 2. No	→Q419

	VCT?		
Q418	If your response to Q417 is "***No***" why? **(Circle all that apply)**	1. Service is not accessible 2. Cost is high 3. Fear of positive results 4. Fear of stigma and discrimination 5. Others (specify)_____ 88. I do not know 99. No response	
Q419	Have you been addicted to any one of the followings during your lifetime? **(Circle all that apply)** **/ "Drug" refers to drugs other than drugs for treatment /**	1. Chat chewing 2. Alcohol drinking 3. Cigarette smoking 4. Drug use 99. No response	→Q421
Q420	Have you been experiencing any one of the followings during the last 12 months regularly? **(Circle all that apply)** **/ "Drug" refers to drugs other than drugs for treatment /**	1. Chat chewing 2. Alcohol drinking 3. Cigarette smoking 4. Drug use 99. No response	
Q421	How much is unsafe sexual behavior in light of seriousness of HIV/AIDS in the urban community at present time?	1. Increased 2. No change 3. Decreased 88. I do not know 99. No response	→Q423
Q422	If your response to Q421 is **"***Increased"* or "*No change,*" what are the barriers to the behavioral change towards the prevention of HIV/AIDS?	1. Low IEC efforts 2. Increase in number of illegal video houses arousing sexual feelings 3. Low involvement of the community 4. Low involvement of the religious organizations	

	(Circle all that apply)	5. Traditional malpractices 6. Lack of recreational areas 7. Stigma and discrimination attached to HIV/AIDS 8. Gender inequalities 9. Unemployment 10. Others(specify)_____ 88. I do not know	
Q423	What do you recommend to overcome the barriers to behavior change towards HIV prevention? **(Circle all that apply)**	1. Strengthen the IEC activities 2. Increase involvement of the religious organizations 3. Increase involvement of the community 4. Women empowerment 5. Strengthen school health education related to HIV/AIDS 6. Remove stigma and discrimination 7. Taking legal measures on illegal video houses 8. Others (specify)_____ 88. I do not know	

This is the end of the interview. Thank you very much for your answering the questions.

ANNEX 2. FOCUS GROUP DISCUSSION GUIDELINE

Good morning/ afternoon, we thank you all for coming on time.

My name is _____. My colleague near to me is called _____. We came from the Amhara Region Health Bureau.

Read the following as it is:

"After a brief introduction, we will be talking about different issues related to HIV/AIDS. We will be asking you questions about your overall experience regarding HIV/AIDS in your locality and issues pertaining to barriers to behavioral change towards the prevention of HIV/AIDS. We will conclude the session by asking for your recommendations on ways to bring about positive behavioral change towards the prevention of HIV/AIDS. Would you be willing to participate in the discussion?

If yes, proceed.

If no, thank and stop here.

_____

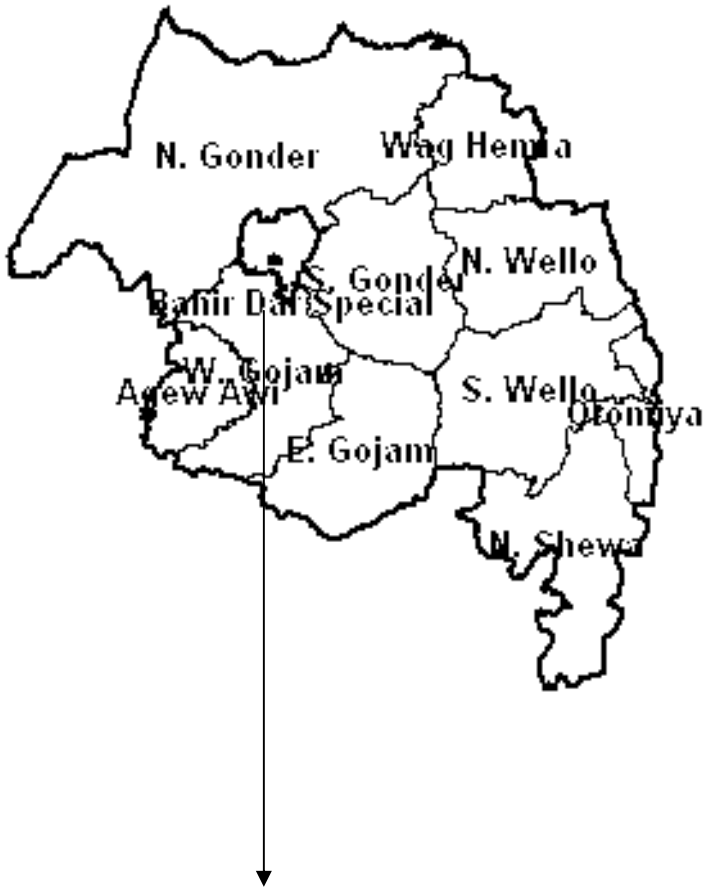
(Signature of the moderator certifying that consent has been obtained verbally)

Date_____Time_____

TOPIC GUIDELINE FOR FOCUS GROUP DISCUSSION

1. What do you perceive about HIV/AIDS? (Means of transmission and prevention as well as attitudes towards the prevention)
2. Is the behavioral change towards the prevention of HIV among the urban community is low or high? If low, what are the barriers? If high, what were the favorable conditions? (Probing is very important).
3. Among the following socio-demographic factors, which ones have impacts on behavioral change towards HIV prevention? (Sex, age, religion, ethnicity, marital, educational, economic and occupational statuses as well as residence.)
4. What are the important sources of information for positive behavioral change towards HIV/AIDS prevention?
5. Discuss on the impacts of IEC activities on behavioral change towards HIV/AIDS prevention.
6. Do you suggest another means of bringing about positive behavioral change in order to curtail the fast spread of HIV/AIDS among the urban the community?

This is the end of our discussion. Thank you very much for your participation in the discussion.



Annex 3. Sketch map of Amhara Region indicating the study area

Declaration

I, the undersigned, declare that this study is my original work and it has not been presented for a degree in this or any other universities, and that all the sources of materials used for the thesis have been duly acknowledged.

Name- **Befekadu Sedeta**

Signature _____

Place -**Addis Ababa**

Date of submission – **June 2004**

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

Name **-** Dr**. Ahmed Ali**

Signature_____