

**INVESTIGATING INTO THE MAJOR FACTORS
RESPONSIBLE FOR THE SPREAD OF THE HIV/AIDS
EPIDEMIC IN ADDIS ABABA AND NAZARETH**



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INVESTIGATING INTO THE MAJOR FACTORS RESPONSIBLE FOR THE SPREAD OF THE HIV/AIDS EPIDEMIC IN ADDIS ABABA AND NAZARETH

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I. Statement of Declaration

I, Tesera Bitew, undersign and declare that this thesis is my original work. I have carried the present study independently with the guidance and support of the research advisor. This study has not been submitted for the award of any degree in this or any other institution and all sources of materials used for thesis have duly been acknowledged. It is in a partial fulfillment of the requirement of the program MA degree in counseling Psychology.

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II. Statement of Certification

This is to certify that Ato Tesera Bitew has carried out his research work on the topic entitled **The Major Factors Responsible for the Spread of HIV/AIDS in Addis Ababa and Nazareth**. This work is original in nature and is suited for the award of the MA degree in counseling psychology. The thesis has been submitted for examining with my approval as a university advisor.

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ABSTRACT

The only way to solve the problem of HIV/AIDS is prevention than treatment by identifying the major factors responsible for its drastic distribution. This paper tries to find the major factors that are responsible for the distribution of HIV AIDS in Addis Ababa and Nazareth. Therefore, the objective of this paper is to find out the major factors that are responsible for the distribution of HIV epidemic. Specifically, it is intended to:

- 1. identify the demographic factors those are associated with HIV*
- 2. identify the unique behavioral characteristics that lead to HIV infection*
- 3. explore the effect of socio-cultural factors on HIV distribution*
- 4. explore the impact of the socio-economic factors on HIV distribution*

The study was conducted by distributing questionnaires with four categories of questions to HIV victims waiting medication in hospitals and in Dawn Hope of Ethiopia offices. The data are then analyzed by categorizing to four sections 1) Analysis of behaviors versus demographic variables, 2) Behavioral versus Behavioral variables, 3) Behavioral versus economic variables and 4) Behavioral versus social-cultural variables. The data collected from 100 HIV patients in hospitals and Dawn Hope of Ethiopia in Addis Ababa and Nazareth is analyzed by using cross tabulations and frequency tables to observe the association of one variable on the behaviors of individuals that are susceptible for HIV infection. To decide on the existence of association between a pair of variable using chi square test of independence, coefficient of contingencies were computed. Variables that are associated with some behaviors such as multiple sexes, drug addiction and others are explained in cross tabular forms and bar charts. The result indicated that the behavioral variables such as drug addiction, openness and interest to exchange about HIV and Condoms and the demographic variables such as sex, marital status, age and place of birth are the major factors for the distribution of HIV/AIDS followed by socio-economic factors such as occupation, average income and housing issues. But the socio-cultural factors such as rape, tattooing, ear piercing and FGM are found to have insignificant effect on the distribution of HIV/AIDS in Addis Ababa and Nazareth.

CHAPTER ONE: INTRODUCTION

1.1. GENERAL BACKGROUND OF THE STUDY

The Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome (HIV/AIDS) is the most devastating disease to ever face humankind. The United Nations and the World Health Organization estimate that currently 40 million people are living with HIV/AIDS. More than 90 percent of HIV infected people live in developing countries, with most new infections occurring in young adults between the age of 15 and 49 (UNAIDS/WHO, 2004).

The epidemic has become a serious health and development problem in countries around the world. Almost sixteen years have been counted since the AIDS epidemic was recognized in Ethiopia and 25 years in the world. The Ethiopian population counts only one percent of the world's population, but nine percent of the global HIV infections are found in this country (Schin, 2000). As a recent data shows, it is estimated that 7.4 percent of the population in the country is already infected with HIV (A.A, 1998).

According to UNAIDS Report of the Global AIDS Epidemic of 2004, Ethiopia's national adult prevalence for 2003 was estimated at 4.4 percent, with a 12.6 percent urban rate and a 2.6 percent rural rate. The number lost to AIDS was an estimated cumulative total of 900,000 by 2003 and is projected to reach 1.8 million by 2008 if present trends continue. Adult (15-49 years) deaths due to AIDS are expected to rise in the coming years. AIDS already accounts for about one-third of all young adult deaths in the country.

The epidemic is one of the current grave problems in the world particularly in developing countries in Africa such as Ethiopia. Our mother land stood fourth in the rate of HIV prevalence in Africa. Among women, AIDS cases peak between ages 20 and 29; for men, between ages 25 to 34. This is likely related to age mixing, wherein young women have older male sex partners, primarily for economic reasons. The group with the highest HIV prevalence in the country is women ages 15 to 24 (12.1 percent).

In Addis Ababa, the major urban area, HIV prevalence increased among antenatal clinic attendees tested from 4.6 percent in 1989 to 17.8 percent in 1996. In 1999/2000, HIV prevalence in Addis Ababa was 15.05 percent. In 1991, a median of 5 percent of antenatal clinic attendees tested in DireDawa and Metu were HIV positive. In 2000, the median HIV prevalence among ANC attendees in 17 sites was 11.95 percent with a range of 0.7 percent in Gambo in Oromia Region to 20.8 percent in Bahir Dar in Amhara region.

Information on HIV prevalence among sex workers in Addis Ababa has been available since the mid-1980s; however, there is very little recent information. In Addis Ababa, less than 1 percent of sex workers tested HIV positive in 1985. By 1990, HIV prevalence among sex workers tested in Addis Ababa had reached 54 percent. Outside of Addis Ababa, information on HIV prevalence among sex workers is available from 19 sites in 1988 and ranged from 5 percent to 38 percent. In 1998, 17 percent of sex workers tested across 22 sites was HIV positive. HIV prevalence ranged from 1.3 percent in Masawa (now in Eritrea) to 38.1 percent in Dessie (HIV prevalence htm.).

HIV prevalence among STI clinic patients in Addis Ababa increased from 8 percent in 1987 to 38 percent in 1992. HIV prevalence among female STI clinic patients increased from 8 percent in 1987 to 37 percent in 1989. There has been no follow up data since then. In 1985-86 about 0.1 percent of the military recruits were HIV positive and the rate increased to 3 percent in 1991. In 1988, 17.3 percent of the drivers of the Ethiopian Freight Transport Corporation tested were HIV positive and the percentage of HIV positive drivers in the corporation had raised to 33 percent in 1992. Among the technicians of the same corporation, HIV prevalence rose from 4.1 percent in 1988 to 78 percent in 1992.

Currently, research has been conducted on the nature of HIV atom by atom and a good deal of work has been done to develop a vaccine. Some drugs have also been invented to extend the life expectancy of HIV patients. But, a genuine pharmacological cure is unlikely. The use of condoms has been increased from 1 million in 1990's to 60 million in the current time; the society in all over the regions of the country are very aware off about the nature of HIV and its transfer methods. The reason for such awareness is the public media and other community resources (UNFP, 2004). But the spread of HIV is still increasing about proportionally in the rate of condom spread and information dissemination.

Such spread of HIV in Ethiopia is more in some regional towns like DireDawa, Nazareth, Bahir Dar, Awasa and Addis Ababa than other towns and rural areas. Nazareth, a tourist town hundred kilometers from the Ethiopian capital, Addis Ababa, has an alarming 18 per cent HIV prevalence rate (TWF Indian Health.htm.).

But it is uncertain that the people in these towns are more educated, informed and aware of the issues about HIV/AIDS than other people in other towns and rural areas. Therefore, these all indicate that the major factors for the spread of HIV epidemic are beyond the awareness of the society. To reduce the spread of HIV epidemic, careful research should be carried out to identify priority factors leading to HIV infection.

1.2. REVIEW OF LITRATURE

To match the research findings with the literature related to HIV/AIDS, information about HIV such as its way of transmission, treatment and prevention and the factors responsible for HIV spread were inferred. In addition, some of the principles of success in relation to HIV prevention and treatment and some other empirical reviews of important information about the epidemic have been included.

1.2.1. Transmission, Treatment and Prevention of HIV. To find a solution for the HIV epidemic, a thorough study of its nature has been made. The nature of the pathogen, its way of transmission as found out by researchers as well as the preferred ways of prevention and treatment has been indicated below.

Transmission of HIV/AIDS. The transmissibility of HIV is very low. HIV is not influenza or measles which spread like wildfire. Again, HIV is not like influenza or measles where the period of contagiousness is just a few days. For HIV, it can be years.

According to different medical reports, HIV infection is sexually transmitted primarily through unprotected vaginal or anal intercourse. During sexual contact, to gain entry into the body of an uninfected person, the HIV virus needs to bind target cells with specific receptors (namely CD4 receptors) on its surface. Cells with these special receptors are plentiful in the lining of the genital track and that of the anus.

Sexually transmitted infections (STIs), such as syphilis, gonorrhea or herpes, make it very easy for HIV to get into the body. An untreated STI in either partner increases the risk of HIV transmission during unprotected intercourse ten-fold (Ministry of Health and Family Welfare Munirka, New Delhi [www/http: salekchand2003.com](http://www.salekchand2003.com))

As a recipients of semen and due to the special anatomical structure of the vagina as well as due to the socio-cultural effects, women are two to four times more likely to get infected with HIV through unprotected vaginal sex than men, due to the following reasons (Ministry of Health and Family Welfare Munirka, New Delhi [www/http: salekchand2003.com](http://www.salekchand2003.com)):

Research has shown that the chances to become infected with HIV after one act of unprotected receptive anal sex is approximately 20 times greater than after one act of unprotected vaginal sex. As Fauci states, the following people are most at risk of HIV infection: People who have unprotected vaginal or anal sex; People who have sex with many partners, thereby increasing the chance that they will encounter a partner who is HIV infected; People who share needles; Babies of mothers who are HIV infected; People who have another STD, especially STDs that cause open sores or ulcers such as herpes, cancrroids or syphilis; Hemophiliacs and other people who frequently receive blood products.

Prevention of AIDS. The two alternative methods to prevent the HIV/AIDS epidemic are the use of vaccines and modification of HIV risk behaviors through education, information communication and counseling. An extensive body of research demonstrates the link between HIV prevention programs and declines in risk behavior, HIV and other sexually transmitted disease (STD).

Many scientific reviews of HIV prevention have been completed. Each found extensive evidence of prevention effectiveness and reach similar conclusions, including: A panel of experts in behavioral science, epidemiology, and public health convinced by the institute of Medicine concluded in 2000: “ Above all, HIV prevention works: there is a wide range of proven strategies to reduce behaviors that increase the risk of transmitting or acquiring HIV.”

In 1997, the National Institute of Health (NIH) consulted leading experts in the fields of HIV /AIDS, behavioral science, and epidemiology. They reported: "When we consider the available knowledge from the entire body of literature, we can reach a clear conclusion: Prevention programs significantly reduce HIV risk behaviors. This is true across a variety of risk behaviors and in a variety of populations at risk."

Joint United Nations Program on HIV/AIDS (UNAIDS) in a 2001 report, UNAIDS concluded that prevention activities "can and do work," with results including "increase in condom use, reduction in visits to sex workers, postponement of first sex, and reduction in sharing of injecting equipments among drug users." It is thus evident that many of the literature reviews focus on the behavioral modification of HIV risk behaviors. Because HIV transmission is so difficult, changing behavior could go a long way toward stopping the epidemic. In the words of Anthony S. Fauci, Director of the National Institute of Allergy and Infectious Diseases, "Unlike microbial scourges, such as malaria and tuberculosis (among many others), for which there is very little that people can do to prevent infection, HIV infection in adults is entirely preventable by behavior modification.

Shisana has recommended that to effectively reduce new infections and reverse the rapid spread of HIV in this region, it is crucial that government and civil society join hands to create a social environment that discourages men from engaging in risky behavior that puts them and consequently women at risk of HIV. Governments should integrate international laws and conventions into their legal system to ensure that women do not remain subservient to men. This includes repealing all the discriminatory customary laws that disempowering women in property ownership, land ownership and inheritance, and encourage harmful practices such as marital rape and marrying young girls to older men

As part of the HIV prevention program, campaigns must go beyond the "abstain, be faithful and use condom" approach and adopt community-based strategies that involve traditional leaders to lead a campaign to change the traditional practices and stereotypes that increase vulnerability of men and women to HIV. These include discouraging older males from having sex with young females; changing the beliefs that for men to be macho they must have multiple partners; and discouraging domestic sexual violence where women are forced to have sex with their husbands. Such a campaign could include encouraging men and

women to jointly seek voluntary counselling and testing for HIV before getting married, and before conceiving a child. This will encourage both men and women to take joint responsibility for protecting one another from infection.

The education system should be used to change social norms that increase vulnerability to HIV for men and women. This involves changing the primary school curriculum and introducing new positive roles for men and women. It might also include defining gender as a subject in primary schools to address the behaviors that expose men and women to risk, not necessarily only from HIV/AIDS.

Appropriate gender-sensitive training program for the judicial system should be developed and implemented to ensure sex offenders are punished to the full extent of the law. This will reduce the prevalence of sexual violence that permeates our society and puts women and children at risk of HIV.

Gender issues should be mainstreamed into HIV prevention, care and treatment activities. In Shisana's own words: "This will be evident when policy planners and researchers have internalized the gender perspective and no longer have to be conscious of their behavior; when they can identify the conditions that affect men and women differently – those that affect men more than women and those that affect women more than men; when they can identify risk factors for men and women for each of their conditions and develop different interventions for men and women accordingly. When this approach is used routinely in developing health policies and plans in an organization, then gender will have been mainstreamed

Treatment of HIV/AIDS. In affluent countries, the progression of HIV disease has been markedly slowed by the use of HAART (Highly Active Antiretroviral Therapy). This refers to combined therapy with three or more drugs, usually two that target the reverse transcriptase and one that targets the viral protease.

i) **Reverse Transcriptase Inhibitors (drug therapy).** Nucleoside analogs such as zidovudine (AZT)(Retrovir®), lamivudine (Epivir®), didanosine (Videx®), etc are drugs that "fool" the reverse transcriptase into incorporating it into the growing DNA strand which

then halts further DNA synthesis. Other Reverse Transcriptase Inhibitor drugs e.g., Viramune® inhibit the enzyme by other mechanisms.

Despite the great advances in slowing the progression of the disease, drug therapy has many unpleasant side-effects (e.g., nausea, diarrhea, liver damage); They demand a very complicated dosing regimen; They often lose effectiveness as they select for the emergence of drug-resistant virions in the patient. This latter problem is particularly serious because of the speed at which mutations occur in HIV.

ii. HIV Counseling- is defined as a special relationship between the counsellor and the client where the client is helped to be able to solve his own problem. It is a helping profession. The main function of the HIV/AIDS counsellor is to be supportive of his or her infected and affected clients, to listen to their problems and to empower them to solve their problems and better their lives so that the client will have a both physiological and psychological relief and to protect the transfer of the disease to others. In addition, it is aimed at changing the HIV risk behaviors of the clients. It is more preferable because it has no side effects as chemicals.

1.2.2. Factors Responsible for the Spread of HIV. HIV/AIDS is a sexually transmitted disease. According to the explanations given in [www\TWF Indian Health.htm](http://www.TWF Indian Health.htm), factors that fuel the spread of HIV in Ethiopia are: "Poverty, prostitution and migration; Lack of education and health services; Ignorance and misconceptions regarding the transmission and prevention of HIV/AIDS; Stigma and discrimination toward people living with HIV/AIDS; Limited access to HIV/AIDS information, especially for people living in rural areas; Gender inequality - social and economic; Harmful practices such as FGM, abduction, rape; Reticence to openly discuss sex within the family and community; War and natural disasters, which can lead to an increasing number of refugees, internally displaced people and the presence of large, mobile military groups; Massive rural-to-urban migration and high unemployment"

Sexual behavior is not the only factor that caused the spread of HIV. There are numerous other reasons that push individuals to HIV risky behaviors. For the sake of simplicity, the factors are here categorized as Behavioral factors, Socio-economic, demographic factors and

socio-cultural factors. All the socio-economic, demographic or socio-cultural factors finally affect the behavior of the individuals. Some of these factors increase HIV risky behaviors such as unsafe sex.

Behavioral Factors. In a media released meeting in South Africa, the data showed that Americans and Europeans are in the lead when it comes to the number of sexual partners and that South Africans as well as Thailanders are rather average. Americans and Europeans also have the highest frequency of sexual intercourse ("<http://en.wikipedia.org/wiki>").

According to the presentation in media release in South Africa, seroprevalence studies indicated that more homosexual men and fewer of the general population had diagnosed with HIV in developed countries, while the opposite is true for the African population, especially in East and Central Africa ("<http://en.wikipedia.org/wiki>"). Geraldo argued that among male homosexuals the main cause of AIDS is drug abuse.

It was argued that the link between HIV and cofactors might explain why the epidemic in Africa is mainly heterosexual. It might relate directly to the high incidence of sexually transmitted disease and practices such as dry sex ("<http://en.wikipedia.org/wiki>"). Most panelists maintained that addressing gender issues and reducing the risk of rape were very important factors in reducing the spread of HIV.

During the first Presidential AIDS Advisory Panel meeting, it was suggested that the initial spread of AIDS originated with promiscuous, homosexual drug users, from Los Angeles, through the United States, into Europe and various other countries.

A puzzling bit of information to some of the panelists was the repeated claims that AIDS has wiped out whole villages in Africa in a matter of weeks or months, whereas nothing like that had ever happened in the USA or anywhere else, even among the most sexually promiscuous society that ever existed – i.e. people that frequented homosexual night-clubs and bath houses in San Francisco, New York and Los Angeles in the 1980s.

Since it seems that most of the people infected with HIV in South Africa are black, any sex theory about the transmission of HIV/AIDS would have to postulate that African people are highly promiscuous. Moreover, Fiala had presented figures that showed that Europeans and

Americans are much more highly promiscuous than people in South Africa, or in Africa as a whole.

According to the macro international DHS surveys, which are used by a whole range of agencies, condom are used between 60 percent and 80 percent of the time in the case of first sexual acts in the USA and Europe, compared to only 14 percent in South Africa. This shows that people are not adapting their behavior, despite the fact that there is a high level of knowledge in many South African communities about the nature of AIDS and the fact that it is sexually transmitted. Abdool-Karim suggested that it is necessary to create the social environment to implement health promotion in its broadest sense when one is looking at creating condom use as the normative behavior – to bring about a change in mindset that it is 'cool' to use a condom. A relatively few condom consumption but high sexual behavior of African countries may be the reason for high spread of HIV in Africa.

Age factor analysis in different researches also indicates that up to 60 percent of all new HIV infections occur among 15-24 year-olds in some developing countries. Yet, vulnerability to STIs including HIV is systematically patterned so as to render some young people more likely to become infected than others.

Socio-Economic Factors. On the other hand, World Health Organization, 1998 emphasizes Unequal life chances such as economic differences of people as a major factor for HIV spread and WHO emphasizes on young people living in poverty, or facing the threat of poverty, may be particularly vulnerable to sexual exploitation through the need to trade or sell sex in order to survive (World Health Organization, 1998). Sometimes, the exchange of sex for goods and money may be regularized in the form of what have been called "sugar daddy" and "sugar mummy" relationships.)

Gender inequality in socio-economic status is one of the most significant causes of the increasing rate of HIV infection. Among females the subordinate role accorded women in the family and in public life contributes to women's vulnerability. The marital power bestowed upon men in some societies makes it difficult for women to negotiate for safer sex. Gender inequality in sexual relationships diminishes the chances of taking preventive

measures, dramatically increasing the risk for HIV infection. What complicate condom use are perceptions about condoms.

Geraldo, in the South Africa media release about spread of HIV however, claimed that pharmaceutical companies would welcome such an idea, as they would commercialize the production of anti-retroviral drugs, syringes, condoms, formula meals and so on. He criticized the World Bank for promoting international loans to get Africa to purchase AZT and other anti-retroviral drugs and condoms as well as do more HIV testing. This, he claimed is bound to increase poverty in Africa and increase the wealth in the west.

Geraldo suggested that the only rational way to stop the spread of the AIDS epidemic in the African continent is by finding solutions to the economic disparities that are rampant. Ethiopia more than South Africa is a country with the highest poverty and economic disparity which in turn increases the spread of the HIV epidemic. The spread HIV in turn also increases poverty.

Socio-Cultural Factors. Behavioral and social factors account for differences in vulnerability and risk for men and women, for example, it is often the norm for men to have multiple sex partners, which puts both men and women at risk for infection. It is estimated by different researchers that 60 - 80 percent of women who are HIV positive had sex solely with their husbands. In addition, women's social status is lower than that of men; women also tend to be poorer than men, thus their economic, political and social standing is less powerful than that of men, which increases their risk of HIV infection.

According to (Jejeebhoy, 1998), lack of sufficient sex education within the family and community is the major cause of HIV spread. As some researches in some African countries suggest, girls remain uninformed since sex and reproduction are considered distasteful and embarrassing subjects within the family.

Differences in social norms for rearing girls and women affect young women's ability to control sexual situations, thus making them vulnerable to gender-based violence and coerced sex. One reason for high rates of sexual violence is the common belief that men are not able to control their sexuality and hence their demand for sex is understandable. Certain cultural

norms/practices and expectations emphasize a culture of silence on sexual matters so that it becomes inappropriate for men and women to talk about sexuality. In relation to this Gupta, Weiss and Mane place as important factors for HIV spread as the young women's little control over how, when and where sex takes place in many parts of the developing world (Gupta, Weiss & Mane, 1996). The high social value placed on virginity in unmarried girls may pressure parents and the community to ensure that young women are kept ignorant about sexual matters. This means that young women are unlikely to be able to communicate their need for safer sex with partners.

Condom use is often associated with promiscuity. It is thus difficult for a woman to suggest to a man that he wears a condom because she might not trust the partner or it may be interpreted that she does not trust the partner. At the same time, some men who want to use a condom at times have difficulty in getting women to agree.

In Ethiopia, different harmful cultural practices such as tattooing, male circumcision, female genital matriculation (FGM) ear piercing, vasectomy, etc are major socio-cultural factors promoting the spread of HIV (Mitku W/ Mariam: 1999)

In terms of ethical issues, the panelists have come into agreement that "Universal ethical principles can be used to analyze problems in reproductive health. The principle of beneficence obligates people to strive to bring about more beneficial consequences than harmful ones. The principle known as respect for persons presumes that all human beings have dignity and are worthy of respect. Showing equal respect for women as persons means recognizing their autonomy and treating them as capable decision-makers and full participants in medical decisions. A third leading concern of bioethics is justice, which requires a fair spread of family planning methods, including access to safe abortion in cases of contraceptive failure (Macklin, Ruth: 1996).

In terms of human right, the AIDS epidemic highlights the dynamics of gender-based inequalities, as shown by cited survey in KwaZulu-Natal, which demonstrated far higher levels of HIV infection among women than among men in the age groups 20 to 24 and 25 to 29.

In many countries like South Africa, stigma and discrimination are also suggested to be the major causes of HIV spread. Discrimination is defined by Canadian courts as “A distinction whether intentional or not but based on grounds relating to personal characteristics of the individual or group, which has the effect of imposing burdens, obligations or disadvantages on such individuals or groups which are not imposed on others, or which withholds or limits access to opportunities and benefits available to other members of society.” Forms of discrimination in Ethiopia include: Isolation: bed room, cooking utensils, washing facilities; Insult both verbal (naming, relating) non verbal (avoidance, distancing); Forcing a PLHA member to leave family home and seek refuge under some humanitarian organizations; Preventing from social participation in social ceremonies such as wedding, mourning and community affairs; Forcing PLHA to leave from rooms rented; Pointing finger at, gossiping, blaming, etc.

Stigma is a mark of shame or discredit on a person or group. Stigmatization is the fact of pointing a finger at an individual, putting a stigma on him. Manifestations of stigma include: Communications: words, images, popular discourse; Social relations (including within institutions and within families and communities); Laws and policies; Self-inflicted stigma, the experience of those at risk of stigma; and Prejudice, avoidance, ostracism, hostility. Thus, protection of the right to confidentiality and freedom from inhuman treatment has been proved to encourage and facilitate people seeking voluntary counselling and testing

Socio-demographic Factors. Xiushi Yang, an associate professor in Old Dominion’s Department of Sociology and Criminal Justice in china, has found in his research entitled “Reward and Risk: Migration and the Spread of AIDS in China” that the major cause of the spread of HIV in China is migration. He believes that the arrival and quick spread of HIV in China can be best understood in the context of the profound social, economic and behavioral changes the country has been experiencing, which have facilitated the diffusion of behaviors such as the use of inject able drugs and prostitution. He has further explained that economically, temporary migrants have historically worked at jobs that are dirty, dangerous and dead end, with the least social prestige.

Currently, though there are no statistical evidences, Addis Ababa and Nazareth are highly populated because of migration from rural areas in addition to other population growth factors. Like china, these migrants are engaged in immoral activities liking begging, prostitution, fraud, etc which are most liable to HIV infection. Therefore, it is more probable that despite limited economic success relative to what was possible at home in the countryside, migrants experience little social or cultural assimilation and thus feel helpless, insecure, discontented and resentful.

In 2000, a demographic and health survey (CSA 2001) was conducted in Ethiopia with the objective of providing up-to-date and reliable data on fertility and family planning behavior, child mortality, children's nutritional status, the utilization of maternal and child health services and knowledge about HIV/AIDS. This survey revealed a very low educational level amongst the majority of Ethiopians; about 62 percent of males and 77 percent of females had no formal education and less than three percent of males and 1.2 percent of females completed primary education. Only 18 percent of households had access to piped drinking water and the majority of Ethiopian households (82 percent) did not have a toilet. The practice of female circumcision was widespread in the country; about 80 percent of women were circumcised. About 25 percent of the Ethiopian women who died in the seven years preceding the survey had died from pregnancy-related causes. The maternal mortality rate was 871 deaths per 100,000 live births for the period 1994-2000. Neonatal mortality rate was 49 per 1000, infant mortality rate was 97 per 1000 and under-five mortality rate was 166 per 1000 live births (CSA 2001).

The risk of HIV infection for young people in developing countries is increased by socio-cultural, political and economic forces such as poverty, migration, war and civil disturbance (Sweat and Denison 1995). Young people may also face the increased risks of HIV infection by virtue of their social position, rigid and stereotypical gender roles, unequal life chances, and poor access to education and health services. It is explained that one of the most important reasons why young people are denied adequate access to information, sexual health services and protective resources such as condoms, derives from the stereotypical and often contradictory ways in which they are viewed. It is popularly believed that all young people are risk-taking pleasure seekers who live only for the present.

Biological Factors. Biological factors increase women's susceptibility to sexually transmitted infections, including HIV, as women's genital tracts have larger exposed areas that permits the virus to survive longer than in men. Men, on the other hand, are more efficient at transmitting HIV because there is a higher concentration of the virus in men's reproductive fluids than in the women's.

Age at first sexual encounter is an important risk factor in HIV infection. In many countries in sub-Saharan Africa, girls become sexually active at an earlier age than boys. They also tend to have sex with older men. Data have already been cited on the higher HIV-infection rates among girls than among boys aged between 15 and 19. A further risk factor for young women is that studies have shown that in some societies, initiation into sex often involves coercion, increasing the risk of trauma during intercourse and the potential for HIV transmission ("<http://en.wikipedia.org/wiki>").

Shisana said legal environments that encourage gender discrimination are fertile ground for the spread of HIV. Most harmful sexual practices have their origin in patriarchal societies that promote the male superiority. In these societies, gender-insensitive and gender-biased laws are passed in parliaments, which are usually male dominated. There are several other gender factors that contribute to the spread of HIV/AIDS: Women are often blamed for the spread of HIV and is incorrectly perceived as a 'woman's disease' in many parts of the world, causing women to refrain from HIV testing and seeking out care in order to avoid being ostracized, abused, and viewed as promiscuous.

1.2.3. Review of Principles for Success. As stated one of the literatures, a number of principles can be identified for future work to prevent HIV infection among young people in developing countries. Prevalent ideologies of masculinity and femininity which prescribe virginity in unmarried girls and promiscuity for boys facilitate the transmission of HIV to young women and young men. These ideologies need to be challenged at policy and program levels, as well as in the media, family and community.

Unhelpful stereotypes about young people and adolescent sexuality inform the attitudes of parents, other adults and even those involved with HIV-prevention. Wherever possible, program designers should attempt to challenge these stereotypes, since they serve as an

obstacle to the development of appropriate and relevant programs of sex and HIV-related prevention.

There is evidence to suggest that young people across the world are having sex earlier than in the past. It is important then that sex and HIV-related education are provided in a timely manner. The widespread denial of adolescent sexuality leads to attempts by adults to constrain and control young people's sexual behavior. Since this is often unrealistic, it means that young people are denied access to information, services and resources which help them to protect their health.

Young people benefit from open and honest communication with adults, and this is absent in many cultural contexts and declining in others. It is important that programs encourage better and more open forms of communication within families, and between families, communities and young people.

Formal programs of sex education and HIV-related education are most successful when they include messages about safer sex as well as abstinence. Convincing messages which inform parents as well as policy-makers that timely and relevant sex education does not propel young people into premature sexual relationships must be disseminated.

Teachers also require training in delivering sex education and developing confidence in talking to young people about sex. Supportive environments, including support from policy makers, educationalists and head teachers, are important in helping teachers to deliver effective programs of HIV-related education. There is evidence to suggest that peer education programs support young people in making changes to their behavior. Programs might also provide opportunities to address issues relating to gender, social status and sexuality in work to promote young people sexual and reproductive health.

Program designers and others concerned with HIV-infection must promote a greater awareness of structural issues affecting sexual and reproductive decision making, including rights and protection for young people, as well as improved access to education and health services. Young people living in developing countries, particularly girls and those young people living in especially precarious circumstances, need protection from rape, sexual exploitation and coercion.

More work with young men is required to enable them to think about their role in relation to both their own sexual health and that of their partners, as well as improving programs for young women. Additionally, work should target adult men and the wider community in order to help adults to reduce the pressures on young men who are developing their masculine identities to behave in ways which jeopardize their own health and the health of others.

When working with particularly vulnerable young people, including those who live on the streets, it is crucial that programs seek to address the daily risks which they face. As well as acknowledging the need for shelter, food, safety and support, those concerned with the prevention of HIV must work with policy-makers to reduce the hardships faced by street children.

Improved access to non-judgmental and user-friendly sexual health services is crucial for young people. Training in adolescent health issues should be provided to health workers in the field of sexual and reproductive health. Young people need improved access to good quality condoms; it is important that confidential and non-judgmental provision is improved for young people.

1.2.4. HIV-related work in different Countries. Styles of HIV-related prevention work aimed at young people have changed over the years. Early in the epidemic, individualistic approaches based on theoretical frameworks such as the Health Belief Model and Social Learning Theory were quite common (Angleton, 1996). These emphasized the importance of helping young people to acquire accurate information and skills relating to the prevention of HIV/AIDS. It was assumed then that if young people could only develop appropriate knowledge and skills, they would be able to change their behavior in order to enhance their sexual health. However, such approaches are now recognized as being oversimplistic and are criticized for failing to take account of contextual, environmental and structural factors influencing young people's "choices", actions and behaviors. These include economic constraints, the effect of migration and war, power relations between women and men, inequalities between young and old, and relationships between dominant versus minority ethnic groups.

Evidence suggests that young people are becoming sexually active at an earlier age than in the past that sex education may be required prior to secondary schooling. As a result, Grunseit (1997) has noted that sex education programs have greatest impact if undertaken prior to the onset of sexual activity.

Some peer education programs aimed at young people out of school have claimed to have helped to bring about significant reductions in HIV-related risk behavior. In the Rakai District of Uganda, for example, where high rates of HIV infection have been reported among young people, researchers found that sexually active young people involved in peer education programs were five times more likely to report using condoms than those who had not been involved in peer education. The figure for those trained as peer educators was higher still, with six times as many peer educators reporting regularly using condoms (Kelly et al, 1995). Some project workers on HIV prevention believe that meeting immediate needs and developing self-confidence of street children and young will help them protect themselves from the risks of HIV infection (Vasconceles et al, 1993)

1.2.5. HIV prevalence in Ethiopia. According to UNAIDS Report of the Global AIDS Epidemic of 2004, Ethiopia's national adult prevalence for 2003 was estimated at 4.4 percent, with a 12.6 percent urban rate and a 2.6 percent rural rate. The number lost to AIDS was an estimated cumulative total of 900,000 by 2003 and is projected to reach 1.8 million by 2008 if present trends continue. Adult (15-49 years) deaths due to AIDS are expected to rise in the coming years. AIDS already accounts for about one-third of all young adult deaths in the country.

On the other hand, the report by the UNFP, HIV/AIDS in Ethiopia, and the majority (69 percent) of HIV patients was reported to be in the 20- 39 year olds. It has also added that the prevalence of HIV was high 5-7 percent in the age range of 20-39years for blood donors, 10percent-20 percent in the age group of 0-19 year olds and 44- 50 year olds among visa applicants, and 20-25 percent amongst above 30 year old VCT clients. The age factor analysis generally indicates the highest prevalence rate for above 20 year olds except for visa applicants.

Addis Ababa is reported to have one of the highest concentrations of HIV/AIDS cases in the country. According to recent surveillance reports of the Ministry of Health, the HIV prevalence rate in Addis Ababa amounts to 12.4 percent, with a number of people living with HIV/AIDS that is increasing to 1.5 million, 40,000 AIDS patients and 79,000 orphans.

Women in the age group of 20-29 years and men in the age group of 25-39 years show the highest prevalence of HIV, whereas the overall ratio for infected male and female amounts to 1:1.2. These days 57 percent of the hospital beds in the city is occupied by AIDS patients. If the epidemic continues unchanged, predictions say that there will be 40,000 to 60,000 new HIV/AIDS-cases every year.

The majority of its total population (73.4 percent) of about 2.9 million people is aged between 15 and 49 years (35- percent between 15 and 24 years). The city is reported to have an annual growth rate of 2.82, mostly due to the rural to urban migration (A.A. City Admn.2005).

1.2.6. HIV/AIDS prevention in Ethiopia. According to U.S. Government Response, the Government of Ethiopia is strongly committed to one national HIV/AIDS action framework. The Strategic Framework for the National Response to HIV/AIDS in Ethiopia for 2001–2005 guides HIV/AIDS programming. To improve program effectiveness under the new strategic plan the government is moving all of its HIV/AIDS coordinating bodies under the direction of the Ministry of Health (MOH).

Recognizing the global HIV/AIDS pandemic as one of the greatest health challenges of our time, President Bush announced the Emergency Plan in 2003. The plan capitalize on the expertise of each USG agency and leverage partnerships with host governments, multilateral institutions, nongovernmental organizations (NGOs) and the private sector to implement effective programs for combating HIV/AIDS and ensure efficient use of USG resources. The Current Critical Interventions for HIV/AIDS in Ethiopia as stated in the report include:

- *Supported peer youth education and life skills programs for in and out of school youth, anti-AIDS youth clubs and religious youth groups that develop the knowledge of HIV/AIDS and life skills of youth.*

- *Directed comprehensive behavior change communication programs targeting most-at-risk populations to reduce the number of persons who engage in risky behavior.*
- *Provided mass media and community programs for the general population to increase knowledge of HIV transmission and prevention methods.*
- *Mobilized religious and community leaders to support HIV prevention, care, and support programs and also to reduce the stigma facing people living with HIV/AIDS.*
- *Supported expansion of voluntary HIV counseling and testing centers and implemented a promotional campaign called "Knowing is a modern way of living" to increase awareness of HIV status and increase the number of individuals tested.*
- *Supported partnerships for prevention and care services with faith-based organizations, particularly the Ethiopian Orthodox Church and the Islamic Supreme Council.*

The Ethiopian MOH, in its policy to prevent the spread of HIV/AIDS epidemic has generally focused in education, information, and finding strategies on how to help the HIV victims but, it does not tried to identify the priority factors boosting the spread of the epidemic. The US policy on HIV in Ethiopia focuses in modification of HIV risk behaviors but it requires large amount of time and economic budget to identify the HIV risk behaviors of persons in different target areas of the country to make sound decisions regarding about HIV in Ethiopia.

It means, no sufficient research was made in the country regarding about the different priority factors in different target populations of the country. This paper is intended to identify the major factors of the drastic spread of the epidemic.

In general, the prevention of the HIV/AIDS epidemic requires setting priorities by analyzing the factors that boost its spread. Different research studies have indicated different priority areas for the spread of the epidemic. According to the study made to identify the cultural determinants of HIV in Ethiopia, it was indicated that cultural practices involving bleeding which include circumcision, vasectomy, milk teeth extraction, tonsillectomy, blood letting, tattooing and ear piercing are widely accepted socio-cultural practices in Ethiopia with slight changes in degree of acceptance among the regions.

Though priority was not stated for the target population, the researcher has also identified the existence of rape and the societal beliefs such as considering sex as a secret. In spite of the widespread of these harmful practices, it was also found out that the society has a very high level of awareness level about HIV/AIDS/STDs which include knowledge about ways of transmission and mode of prevention, about condom use due to media exposure like radio and other community resources. But still the epidemic is devastatively spreading.

1.3. STATEMENT OF THE PROBLEM

As indicated in the literature review different factors are supposed by different researchers for the spread of HIV/AIDS such as cultural factors, age, gender inequality education, sexual information, sexual behavior, economic status, etc. But, the major factor that is particular to a specific region or country is not stated yet in these researches. Thus, this research is mainly aimed at identification of the real factors for the exponential spread of HIV/AIDS in Ethiopia in general and Addis Ababa and Nazareth in particular so that all citizens, institutions, the government, charitable organizations and all other concerned units can make their own sound decisions at least to slow down the spread of the pandemic. In addition, the student researcher will try to recommend the proper prevention methods to break the expansion of the disease to the rest of our “mother land’s working force territories”. As a result, this research is intended to find out the major factors responsible for expansion of the epidemic particularly in Nazareth and Addis Ababa. The basic questions hoped to be solved in this paper thus are the following:

1. What are the **demographic factors** that are associated with HIV?
2. What are the unique **behavioral characteristics** that lead to HIV infection?
3. What are the **socio-cultural factors** for HIV spread?
4. What is the impact of the **socio-economic factors** on HIV spread?

1.4. OBJECTIVES OF THE STUDY

The overall objective of this paper is to find out some basic factors that are responsible for the promotion of the drastic spread of HIV/AIDS. Specifically, the study was guided by the following research objectives.

1. To explore the demographic factors those are associated with HIV susceptible Behaviors such as marital status versus Interest and Openness to exchange HIV information, marital status versus drug addiction, marital status versus multiple sex, marital status versus the factor that pushes to multiple sex, marital status versus condom usage, marital status versus premarital sex, marital status versus condom torture during sex, sex versus interest and openness to exchange HIV information, drug addiction, multiple sex, the

factor that pushes to multiple sex, type of partners, condom usage, premarital sex, age versus multiple sex, age versus drug addiction, age versus condom usage, age versus condom torture and place of birth versus other HIV susceptible behavioral characteristics.

2. To explore the effect of behavioral characteristics of individuals such as drug addiction, Openness and interest to communicate about condoms, stress coping mechanisms and the factors that push to multiple and unsafe sex on HIV susceptible actions and behaviors such as multiple sex, condom usage, condom torture, premarital sex.
3. To explore the relation of Socio-economic factors versus Behavioral variables associated with HIV such as HIV susceptible behaviors versus education, occupation, average income, and housing.
4. To explore the relation of Socio-cultural factors versus Behavioral variables associated with HIV such as HIV susceptible behaviors versus rape, freedom of communication about HIV and condoms, tattooing, milk teeth extraction and blood donation and nurturing.

1.5. OPERATIONAL DEFINITION OF TERMS

Demographic factors include all the factors that are related to the population such as sex, migration, and location of the towns and so on.

Behavioral Characteristics: The term behavioral characteristics in this paper include all the individual behaviors of a person that make him unique from others in terms of susceptibility to HIV/AIDS. It includes *sexual behavior* such as hetro and homo sexuality, cross sexuality, safe and unsafe sex, rape, anal, vaginal or mouth sex, Rough sex, dry sex; *drug abuse* such as smoking and alcoholism, chewing chat and usage of other chemicals that are addictive in nature.

Socio-cultural factors- It includes all beliefs, norms, practices and attitudes that are associated with the spread of HIV such as stigma and discrimination, circumcision, vasectomy, milk teeth extraction, tonsillectomy, blood letting, tattooing and ear piercing that may involve bleeding, the attitude towards condom usage. It also includes problems related to communication and education among family members and within one's own occupation.

Socio-economic factors it includes all factors related to social and economic affairs such as Poverty, prostitution, unemployment, income, education, migration, and gender inequality.

1.6. SIGNIFICANCE OF THE STUDY

The student researcher hopes the research may provide information about the major factors that are responsible for the spread of the HIV epidemic. Since the issue of HIV/AIDS is the problem and the concern of all individual persons, the Addis Ababa city and the Oromia Regional governments, different business organizations and NGO's such as the Oromia Anti HIV Office, CDC and all others may depend on the research result to make their respective decisions about the drastic spread of the epidemic. The regional governments of Addis Ababa and Oromia can especially depend on the result of the study to formulate different policies and directives that help to reduce the spread of the epidemic. Besides, the research result may help the regional governments as well as the other charitable organizations to design strategies that can help to reduce the spread of the epidemic in.

1.7. DELIMITATION OF THE STUDY

The study was delimited to a population of HIV patients in Addis Ababa and Nazareth. Due to time and money constraints, no other geographic locations were considered. Furthermore, the study was delimited to exploration and description of the factors that are associated with HIV susceptible behaviors of individuals.

CHAPTER TWO: METHODS

2.1. METHOD OF RESEARCH.

To explore the major factors that are responsible to the spread of HIV in Addis Ababa and Nazareth, and to achieve the specific objectives of the research, descriptive survey method of research was used.

2.2. STUDY AREA AND DATA SOURCES

The study is conducted both in Addis Ababa and Nazareth by distributing questionnaire to HIV victims in some selected hospitals attending medication and Dawn Hope for Ethiopia members in Addis Ababa and Nazareth towns to secure information about their sexual behaviors, economic issues such as average income, occupation, and educational level; socio cultural practices such as milk teeth extraction, tattooing and rape; and demographic issues such as sex, marital status and place of birth.

2.3. POPULATION

Both Addis Ababa and Nazareth are reported to have one of the highest concentrations of HIV/AIDS cases in the country. According to recent surveillance reports of the Ministry of Health, the HIV prevalence rate in Addis Ababa amounts to 12.4 percent, with a number of people living with HIV/AIDS that is increasing to 1.5 million, 40,000 AIDS patients and 79,000 orphans. Similarly, the population of HIV patients in Nazareth is estimated to be about half million out of the total population of about 1.1 million people.

As indicated in the report, women in the age group of 20-29 years and men in the age group of 25-39 years show the highest prevalence of HIV, whereas the overall ratio for infected male and female amounts to 1:1.2. These days 57 percent of the hospital beds in the city is occupied by AIDS patients. If the epidemic continues unchanged, predictions say that there will be 40,000 to 60,000 new HIV/AIDS-cases every year.

2.4. SAMLES AND SAMPLING PROCEDURE

One hundred HIV victim subjects were taken purposively. Due to legal and ethical problems, it is very difficult to find a very sufficient number of HIV patients. But, sample of 100 respondents were selected from a total population of HIV patients simply based on accessibility in hospitals and Dawn Hope of Ethiopia Association Offices waiting for the services.

2.5. TOOLS OF DATA COLLECTION

Closed ended questionnaires were distributed to the respondents to gather information from the HIV victims about their sexual behavioral histories such as drug usage, and socio-cultural practices as well as the socio economic and demographic issues of the respondents.

As a result, the questionnaire has four parts. The first part is the general background information section which includes demographic information whereas the other three sections contain questions regarding about the behavioral characteristics such as drug addiction, multiple sexual behavior, condom usage, interest and openness to exchange information about HIV and condoms and premarital sex cases and the remaining two sections are regarding about socio-economic and socio-cultural issues of the respondents like occupation, average income, education, rape, milk teeth extraction and tattooing. The questions were randomly kept from each of the categories in the questionnaire to gather relatively reliable information from the samples. Moreover, the scaling of the questionnaire was different for different questions to make the items suit with the nature of each question and so as to collect relevant data.

2.6. DATA COLLECTION PROCEDURE

To collect reliable information, sixty copies of questionnaires were delivered to HIV patients in Zewditu Hospital waiting medication and counseling services by the counselors of the hospital. The hospital counselors have read and filled the questionnaire for some illiterates. The remaining forty copies of the questionnaires were delivered to the members of the Dawn Hope of Ethiopia Association in Addis Ababa and Nazareth branches.

2.7. DATA ANALYSIS TECHNIQUES

The data collected through questionnaire from the respondents were then analyzed by using tables and graphs indicating frequencies and percentages of the different variables as well as bar charts using SPSS 13.00. This was further analyzed by using chi-square test to decide the significance of the difference between two or more categories and variables at a significance level of .05.

Different authors in different literature such as medical journals and magazines indicated that the principal cause and HIV infection is unsafe sex. HIV infection as a result of blood transfer, due to usage of sharpened materials, blood donation, and HIV infection of the fetus in the womb comprise relatively of small portion of the total cause of HIV transmission. Sexual behavior of individuals, which is a principal cause of HIV, is also affected by other factors such as alcoholism, chat addiction and smoking; demographic factors such as age, sex, place of birth; Socio-economic factors, and Socio-cultural factors.

To find out the effect and association of the four factors on behavioral attributes of individuals that are susceptible for HIV infection, the data analyzed and are presented in a cross tables and bar charts in the analysis. The behaviors of individuals that are susceptible for HIV include: multiple sex, unsafe sex, alcoholism, chat addiction, condom torture, types of sexual partners experienced etc. Data collected in a form of questionnaire are analyzed and summarized in a form of cross tabulations for a pair of variables selected. The overall analysis of the data is categorized into four sections: Analysis of Demographic versus Behavioral variables, Analysis of Behavioral versus Behavioral Variables, and Analysis of Socio-economic versus Behavioral Variables and Analysis of Socio-Cultural versus Behavioral Variables

2.7.1. Cross Tabular analysis of demographic versus behavioral variables.

Some selected behavioral factors that are suspected to be main causes of HIV infection are cross tabulated with demographic factors to determine the strength of association of demographic factors with the behavioral factors. The main pair of variables for which cross tabulation is made includes: 1) Marital Status versus multiple sex, 2) Marital status versus

condom usage, 4) marital states versus condom torture, 5) Sex versus condom torture, 6) Sex versus condom usage, 7) Sex versus condom multiple sex, 8) Age versus multiple sex, Martial versus multiple sex, 10) Marital status versus alcoholism etc.

The chi square test as well as its strength of association for each pair of cross tabulation is done to find out main demographic factors aggravating behaviors that may liable for HIV infection. Then the demographic variables with a high degree of association are selected as main causes of HIV spread.

2.7.2. Cross fibular analysis of behavioral versus behavioral variables. To find out some behavioral characteristics of individuals that result in other behaviors that are susceptible for HIV infection, a cross tabular analysis of different behavioral characteristics is used. It includes the following cross tabular analysis: 1) Multiple sexes versus condom usage, 2) multiple sexes versus chat and alcoholism, 3) Multiple sexes versus HIV related information, 4) Condom torture versus alcoholism and chat, etc. Each pair of variables is tested of a chi square test of strength of association so as to determine the variables that are associated with a selected variable such as multiple sexes.

2.7.3. Cross Tabular Analysis of Economic versus Behavioral Factors. The main cause of HIV is one's own behavior as indicated in the literature review. The behaviors of a person leading to HIV infection are also affected by some other variables such as income. Therefore, the main objective of the cross tab analysis of economic versus behavioral factors is to find out the strength of association between economic factors such as income, occupation, housing etc on the selected behavioral factors such as condom usage multiple sexes, access to HIV information, etc.

Form the chi square test of association strength of association, economic variables that have a relatively high degree of association with behavioral factors selected as major factors for HIV spread.

2.7.4. Socio Cultural versus Behavioral Factors. Some socio cultural practices such as rape, tattooing, teeth extraction, FGM, etc. directly cause HIV infection. Thus, these socio-cultural factors are analyzed in terms of frequencies among the respondents. In addition, these practices cause another behavior on the individual such as multiple sex, alcoholism, chat addiction, unsafe sex, being hopelessness, etc. Thus, the effect of these factors on the behavioral factors is cross tabulated and analyzed so as to find strength of association.

CHAPTER THREE

ANALYSIS AND INTERPRETATION OF DATA

So as to find a solution to the basic question, the data collected through questionnaires are analyzed by categorizing into four categories or sections. These cases include:

1. The Analysis of Demographic versus Behavioral Variables
2. The Analysis of the Behavioral variables that cause Other HIV Susceptive Behaviors
3. the Analysis of Behavioral Versus Economic Variables
4. The analysis of Scio- Cultural Versus Behavioral Variables

In each of the data analysis cases, the analysis is made by using cross tabulation of a pair of variables and chi square tests. In addition, the data are presented in the form of tables and bar charts.

3.1. ANALYSIS OF DEMOGRAPHIC VARIABLES HIV SUSEPTIVE BEHAVIORS

The various demographic factors such as age, sex marital status, place of birth and current residence of the respondents were cross tabulated with the behavioral characteristics of the respondents such as multi sexual behavior, safe and unsafe sex, drug addiction, open discussion of information about HIV and the types of multi sexual partners experienced etc to find out the major demographic factors that lead to HIV susceptible behavioral characteristics. The cross table analysis of any of the demographic factors versus behavioral factors is analyzed by chi square test to decide to accept or reject the related null hypothesis and to determine the degree of association between the two variables. To find out only major causes of HIV infection, only strength of association above 30 percent of Coefficient of Contingency was presented here in terms of both cross tabulation and bar charts. Any two variables associated with the degree of association below 30 percent were considered as very insignificant and it is omitted from the presentation in tables and bar charts.

According to the literature by one of the authors, any strength of association below 20 percent is very weak and insignificant; strength of association between 20 and 40 percents is weak; 40-80 percent is moderate and above 80 percent is strong strength of association.

Marital Status versus Interest and Openness to exchange HIV information. Many times, it is doubtful to decide which groups of the four groups of the marital status, are open and interestful to exchange information about the matters of HIV. The cross tubular analysis of the two variables with chi square test of association has indicated that the two variables are associated with a degree of association 34.1 percent Coefficient of Contingency.

Cross Tab. 3.1. Marital Status versus Interest and Openness to exchange HIV information

			Interest and Openness to exchange HIV information					Total
			No Response	Very Poor	Poor	Good	Very Good	
Marital Status	married	Count	0	8	10	12	5	35
		percent within Marital Status	.0 %	22.9 %	28.6 %	34.3 %	14.3 %	100.0 %
	Unmarried	Count	1	2	13	10	6	32
		% within Marital Status	3.1 %	6.3 %	40.6 %	31.3 %	18.8 %	100.0 %
	Divorced	Count	0	4	4	7	4	19
		% within Marital Status	.0 %	21.1 %	21.1 %	36.8 %	21.1 %	100.0 %
	Widowed	Count	0	0	6	3	5	14
		% within Marital Status	.0 %	.0 %	42.9 %	21.4 %	35.7 %	100.0 %
	Total	Count	1	14	33	33	20	100
		% within Marital Status	1.0 %	14.0 %	33.0 %	32.0 %	20.0 %	100.0 %
% of Total		1.0 %	14.0 %	33.0 %	32.0 %	20.0 %	100.0 %	

Thus, it is conclusive that there is difference in interest and openness to exchange matters of HIV among the four groups of marital statuses as it is tested by the chi square test with 18degrees of freedom at a significance level of .05. The cross tabulation above shows that out of the total sample population, 33 respondents or 33 percent of them are poor in Interest and Openness to exchange HIV information, 32 of them are good and 14 of them are very poor. Out of 14 very poor respondents in interest and openness to exchange HIV information, eight of them are married. Out of 33 respondents who are poor in interest and openness to communicate about HIV 12 of them are married and 13 of them are unmarried. Thus, married people are poorer in interest and openness to exchange about HIV than others.

Marital Status versus Alcoholism, Smoking and Chat. Drug addiction such as alcoholism, chat usage, and smoking though they do not cause direct HIV infection, they cause immediate mental emotionality and mental irrationality which makes the person to decide irrational decisions one of which is multiple sex. Thus the objective of this

analysis was to observe if there is any association between marital status and drug addiction. The behavior of alcoholism cross analyzed with the marital status to find out which categories of the marital statuses is more alcoholic and which group is not.

It was hypothesized thus that alcoholism behavior is different for different groups of marital status. It was hoped that there would be a significant association between marital status and alcoholism. But the chi square analysis has indicated that the degree of association between these variables is very insignificant, 26 percent strength of association. Similarly, the chi square test and the chi square test of association has indicated that there is an insignificant association between marital status and chat usage, only 30 percent. The same is true for smoking. Drug addiction is the same across all the categories of marital statuses, 26 percent, 30 percent and 24 percent for marital status versus alcoholism, marital status versus chat and marital status versus smoking respectively. Besides, the analysis of the frequency spread of the variables indicated that only 14 percent and 11 percent of the total respondents are smokers and chat addicted respectively.

Marital Status versus Multiple Sexes. Though sex is usual for all persons, multiple sexes may not be usual for all people. It is also a serious behavior that leads to HIV infection. The analysis of the sample population in terms of multiple sexes has indicated that about seventy percent of the respondents of HIV infected individuals have responded that they have experienced multiple sexes once or more than once. In addition, about 71.9 percent of the respondents have suspected unsafe sex as the major cause for their HIV infection.

Regardless of the chi square test, the dominant number of married people, forty percent of them have never experienced multiple sexes while only 18.8 percent of unmarried people have reported that they have never experienced multiple sexes. In other words, the majority of the unmarried people, 71.9 percent of them, are the most promiscuous compared to other marital status categories.

Cross Tab. 3. 2 Marital statuses versus multiple sexes

			Have you ever experienced Multiple Sex?				Total
			Many times	Twice	Once	Never	
Marital Status	Married	Count	15	4	2	14	35
		% within Marital Status	42.9 %	11.4 %	5.7 %	40.0 %	100.0 %
	Unmarried	Count	23	3	0	6	32
		% within Marital Status	71.9 %	9.4 %	.0 %	18.8 %	100.0 %
	Divorced	Count	9	2	3	5	19
		% within Marital Status	47.4 %	10.5 %	15.8 %	26.3 %	100.0 %
	Widowed	Count	5	2	2	5	14
		% within Marital Status	35.7 %	14.3 %	14.3 %	35.7 %	100.0 %
Total	Count	52	11	7	30	100	
		% within Marital Status	52.0 %	11.0 %	7.0 %	30.0 %	100.0 %

Marital Status Versus the factor that pushes to multiple sexes. The marital status versus multiple sexual behaviors of the respondents has indicated that the unmarried individuals are the most promiscuous compared to other marital status categories. To determine the major cause of multiple sexes for different groups of marital statuses, marital status is cross tabulated and compared with the factor that pushes to multiple sexes as given by the respondents. The analysis is summarized in the table 3.3 below.

Cross Tab. 3.3 Marital Status Versus the factor that pushes to multiple sex

			the factor that pushes to multiple sex							Total
			No Response	sexual satisfaction	Love	Econ. Advant age	Exces sive drug	Disappo intment	others	
Marital Status	Married	Count	12	7	4	4	3	4	1	35
		% within Marital Status	34.3 %	20.0 %	11.4 %	11.4 %	8.6 %	11.4 %	2.9 %	100.0 %
	Unmarried	Count	7	13	5	2	4	1	0	32
		% within Marital Status	21.9 %	40.6 %	15.6 %	6.3 %	12.5 %	3.1 %	.0 %	100.0 %
	Divorced	Count	6	4	1	4	2	1	1	19
		% within Marital Status	31.6 %	21.1 %	5.3 %	21.1 %	10.5 %	5.3 %	5.3 %	100.0 %
	Widowed	Count	5	5	1	1	1	0	1	14
		% within Marital Status	35.7 %	35.7 %	7.1 %	7.1 %	7.1 %	.0 %	7.1 %	100.0 %
Total	Count	30	29	11	11	10	6	3	100	
	% within Marital Status	30.0 %	29.0 %	11.0 %	11.0 %	10.0 %	6.0 %	3.0 %	100.0 %	

The chi square analysis of the two variables has indicated that the variables are associated to each other by 34.7 percent degree of association with contingency Coefficient. Those who are unmarried are pushed to multiple sexes mainly by their need for sexual satisfaction and love while those who are married are pushed to multiple sex by economic advantage from their partners and disappointment.

premarital sex is HIV infection. It is here hypothesized that premarital sex is different among different groups of marital statuses. The null hypothesis here was “There is no difference in premarital sex cases among the different groups of marital statuses”.

To accept or reject the null hypothesis, a chi square test was made at a significance level of .05 with 12 degree of freedom. According to the analysis from the cross tabulation of the two variables, the null hypothesis is rejected and the reverse hypothesis is accepted. Thus it is concluded that premarital sex is different along different groups of marital statuses. The test of association by using Contingency Coefficient indicated that the two variables are associated by 44.8 percent at an approximate significance level of .05, which is a moderate strength of association.

Cross Tab. 3.5 Marital status Versus Pre-marital sex

			pre-marital sex					Total
			No Response	Many times	Twice	Once	Never	
Marital Status	Married	Count	1	21	2	1	10	35
		% within Marital Status	2.9 %	60.0 %	5.7 %	2.9 %	28.6 %	100.0 %
	Unmarried	Count	1	24	4	0	3	32
		% within Marital Status	3.1 %	75.0 %	12.5 %	.0 %	9.4 %	100.0 %
	Divorced	Count	0	9	1	0	9	19
		% within Marital Status	.0 %	47.4 %	5.3 %	.0 %	47.4 %	100.0 %
	Widowed	Count	0	5	1	3	5	14
		% within Marital Status	.0 %	35.7 %	7.1 %	21.4 %	35.7 %	100.0 %
	Total	Count	2	59	8	8	27	27
		% within Marital Status	2.0 %	59.0 %	8.0 %	4.0 %	27.0 %	100.0 %

The cross tabulation of the marital status versus the premarital sex cases above indicates that premarital multiple sex cases are high for unmarried persons, since 75 percent of them have experienced premarital sexes many times and about 15 percent of them have experienced it once or twice. Next to the unmarried people, married people, 60 percent of them have also experienced a relatively more premarital sex cases.

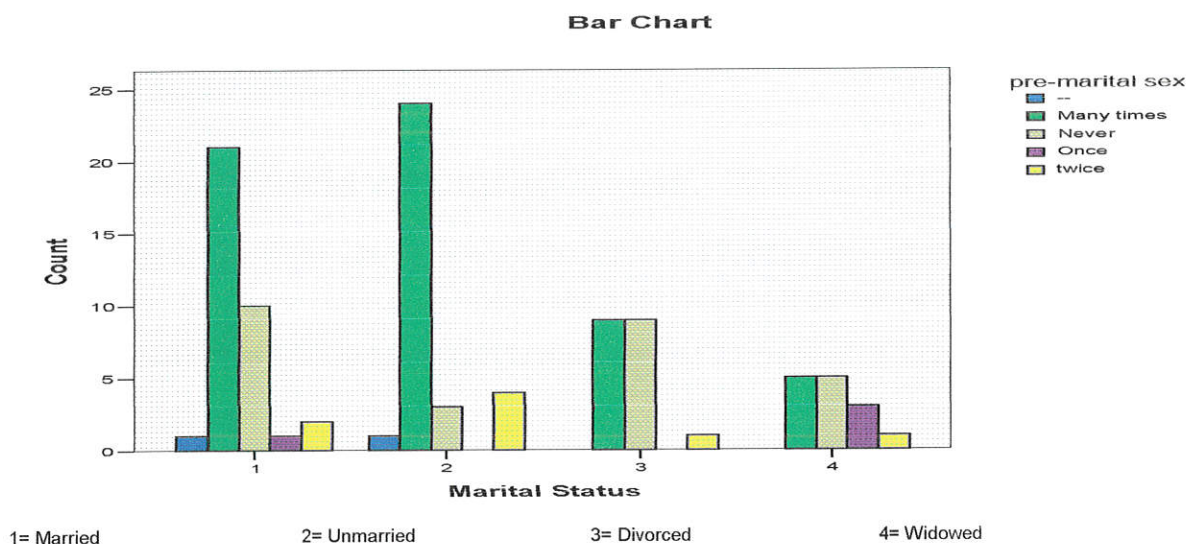


Fig. 3.1 Marital status Versus Pre-marital sex

Similar to the cross tabulation of the two variables, the bar graph, Fig. 3.1 also indicated the same spread of the premarital sex cases across the four categories of the marital statuses.

Marital Status versus Condom torture during sex. A very weak degree of association, only 29 percent, but married persons experience more condom torture than others. Out of 9 respondents who faced condom torture many times during sex, 6 of them are married. Only 62 percent of married respondents never faced condom torture whereas above 68 percent of unmarried, divorced and widowed respondents never faced it. This implies that there is problem of condom usage among married persons than other groups of people based on marital status.

Sex versus Interest and Openness to HIV information & counseling. Interest and openness, access to HIV information, counseling and the party with whom one exchanges HIV information are some of the social variables that may affect the social behavior of an individual. It was suspected here that these social variables may impact the behavioral attributes of a person that may lead to HIV infection. To find out the variation of these variables over males and females, a chi square analysis was made and it indicated that these variables are the same over both sex groups. That is the null hypothesis

7.1 percent and 10.7 percent of them make sex with incidental persons, neighborhood partners and with their occupational staff respectively.

Cross Tab. 3.8 Sex versus Condom usage during multiple sex

			Do you use Condom during multiple sexes?				Total
			No Response	Always	Sometimes	Never	
Sex	M	Count	11	0	17	16	44
		% within Sex	25.0 %	.0 %	38.6 %	36.4 %	100.0 %
	F	Count	27	1	17	11	56
		% within Sex	48.2 %	1.8 %	30.4 %	19.6 %	100.0 %
Total		Count	38	1	34	27	100
		% within Sex	38.0 %	1.0 %	34.0 %	27.0 %	27.0 %

To determine whether there is difference in unsafe sex between males and females groups, a chi square analysis was made which indicated that there is a difference in safe and unsafe multi sexual cases across males and females. The unsafe and safe multi sexual cases are the same across male as well as female groups. That is 27 percent of the respondents never used condom whereas above 34 percent of both males as well as female groups used condom only sometimes.

Sex Versus pre-marital sex. The chi square analysis has indicated that premarital sex is dominant on males than females. It has indicated that there is difference in premarital sex over males and females. The test was done at a significance level of .05 with 4 degree of freedom. The degree of association between the two variables is 42.3 percent at .05 an approximate level of significance.

Cross Tab. 3.9 Sex versus Pre-marital sex

			Have you ever experienced pre-marital sex?					Total
			No Response	Many times	twice	Once	Never	
Sex	M	Count	1	35	5	0	3	44
		% within Sex	2.3 %	79.5 %	11.4 %	.0 %	6.8 %	100.0 %
	F	Count	1	24	3	4	24	56
		% within Sex	1.8 %	42.9 %	5.4 %	7.1 %	42.9 %	100.0 %
Total		Count	2	59	8	8	27	100
		% within Sex	2.0 %	59.0 %	8.0 %	8.0 %	27.0 %	100.0 %

As indicated form the table above, 79.5 percent of males have experienced premarital sex many times unlike to only 42.9 percent of females who experienced premarital sex many times. Similarly, the dominant numbers of females, 42.9 percent of them have never

experienced premarital sex while only 6.8 percent of males have never experienced premarital sex. This implies that males experience premarital sex more than females.

Age versus Behavioral Variables. The cross analysis of age with other behavioral variables such as interest and openness to discuss about HIV information, Unsafe sex, Access to HI”V information, Condom torture during sex, Counseling cases, drug addiction and the party with who the respondents exchange HIV related information has indicated that these variables are not associated with age. That is they are the same regardless of the difference in age categories.

Age versus Suspected Cause of HIV Infection. In many times, the respondents themselves may better report the cause of an action on themselves than others such as the cause HIV infection on themselves. To find out the major cause of HIV infection across different groups of age, a chi square test was made from the cross table of the suspected cause of HIV infection versus age. The test has indicated that there is no difference in the suspicion of the respondents as what caused HIV infection on themselves. All the respondents at all age groups mainly suspect unsafe sex as the major cause of their own HIV infection as tested at the significance level of .05 with 12 degree of freedom.

Cross Tab. 3.10 Age versus Suspected Cause of HIV Infection

			Suspected Cause of HIV Infection				Total
			Unsafe sex	Sharpened Materials	Condom Torture	Others	
Age	7-17	Count	2	0	0	0	2
		% within Age	100.0 %	.0 %	.0 %	.0 %	100.0 %
	18-28	Count	21	1	0	3	25
		% within Age	84.0 %	4.0 %	.0 %	12.0 %	100.0 %
	29-39	Count	33	3	4	6	46
		% within Age	71.7 %	6.5 %	8.7 %	13.0 %	100.0 %
	40-50	Count	14	1	0	6	21
		% within Age	66.7 %	4.8 %	.0 %	28.6 %	100.0 %
	51+	Count	0	1	0	5	6
		% within Age	.0 %	16.7 %	.0 %	83.3 %	100.0 %
	Total	Count	70	6	4	20	100
		% within Age	70.0 %	6.0 %	4.0 %	20.0 %	100.0 %

Regardless of the chi square test, 100 percent of the respondents at the age group of 7-17 years, 84 percent of those at the age group of 18-28 years, 71.7 of those at the age group of 29-39 years, 66.7 percent of those at the age group of 40-50 years and zero percent of those in the age group of above 50 years suspect unsafe sex as cause of their own HIV infection. Thus as age increases the suspicion of unsafe sex as a cause of HIV infection decreases.

The age versus the factor that pushes to multiple sexes has indicated that the majority of the respondents in the group of 29-39 years are pushed to multiple sexes as a result of the need for sexual satisfaction while the dominant numbers of those at an age group of 18-28 years are pushed by excessive drug intake.

In addition, the behavioral variables such as the selection of sexual partners, leading factor unsafe sex, condom usage during multiple sex, free exchange of information about condoms and premarital sex cases have no difference across the different age categories.

Age versus Multiple sexual behaviors. Age is an informal school where the individuals shape their social as well also other multi lateral behaviors such as sexual behaviors. As a result it was hypothesized in opposite to the null hypothesis that the multi sexual behavior of the individuals differs across the different age categories of the individuals. This hypothesis is decided to be accepted by chi square test at a significance level of .05 and degrees of freedom 16. The degree of association between the two variables as indicated from the chi square test is 47.2 percent at coefficient of contingency at an approximate significance level of .05.

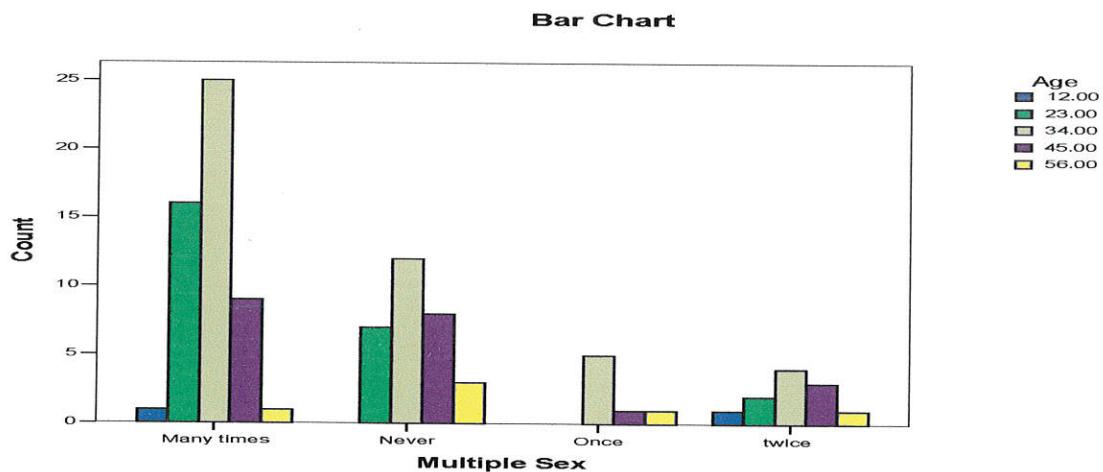


Fig. 3.4. Multiple sex versus Age

As indicated in the tables and the chi square test, the majority of the respondents who have experienced multiple sexes are those at the age group of 34 years (29-39 years). That is 40 percent of them have experienced multiple sex. The relative cross comparison of the age versus multiple sexual behaviors of the respondents from the bar chart also indicates that the majority of the respondents 63 percent of those in an average age group of 34 years have

experienced multiples sex many times. In addition, 52 percent of those respondents at the average age group of 23 years and 38 percent of those at an average age group of 45 years have experienced multiple sex many times. But the chi square test has indicated that the age has no association with the condom torture cases of the respondents

Age versus Unsafe sex without condoms. The unsafe multi sexual behavior among the HIV patients is dominant at an average the age groups 34 years (29-39 years). It is also relatively dominant in the average age groups of 23 years (18-28) and in average age groups of 45 years (40-50 years). In general, the multi sexual behavior is dominant in the adult group of the population both in Addis Ababa and Nazareth.

Cross Tab. 3.11 Age versus Unsafe sex without condoms

			Unsafe sex without condoms					Total
			No Response	Many times	twice	Once	Never	
Age	7-17	Count	1	0	0	0	1	2
		% within Age	50.0 %	.0 %	0 %	.0 %	50.0 %	100.0 %
	18-28	Count	1	13	5	1	5	25
		% within Age	4.0 %	52.0 %	20.0 %	4.0 %	20.0 %	100.0 %
	29-39	Count	1	29	2	1	13	46
		% within Age	2.2 %	63.0 %	4.3 %	2.2 %	28.3 %	100.0 %
	40-50	Count	2	8	1	0	10	21
		% within Age	9.5 %	38.1 %	4.8 %	.0 %	47.6 %	100.0 %
	51+	Count	2	1	0	0	3	6
		% within Age	33.3 %	16.7 %	.0 %	.0 %	50.0 %	100.0 %
Total	Count	7	51	8	2	32	100	
	% within Age	7.0 %	51.0 %	8.0 %	2.0 %	32.0 %	100.0 %	

Place versus Interest and Openness to exchange HIV information

The social behavior of the individuals differs from one place of another. For example, openness to exchange HIV information, the need for counseling and suspected cause of HIV infection, are tested to be different for different groups of respondents in terms of birth place as well as residence as tested by the chi square test at a significance level of .05 with 4 degree of freedom.

The degree of association between these variables is 38 percent at an approximate significance level of .05. In addition, the need for counseling is relatively greater for those whose birth place and residence is Addis Ababa than Nazareth with degrees of association 26 percent at a significance level of .05 and 2 degrees of freedom.

Cross Tab. 3.12 Birth Place versus Interest and Openness to exchange HIV information

			Interest and Openness to exchange HIV information					Total
			No Response	Very Good	Good	Poor	Very poor	
Birth Place	A.A.	Count	0	4	21	16	2	43
		% within Birth Place	.0 %	9.3 %	48.8 %	37.2 %	4.7 %	100.0 %
	Nazareth	Count	1	16	11	17	12	57
		% within Birth Place	1.8 %	28.1 %	19.3 %	29.8 %	21.1 %	100.0 %
Total	Count		1	20	32	33	33	100
	% within Birth Place		1.0 %	20.0 %	32.0 %	33.0 %	14.0 %	100.0 %

But the chi square test has also indicated that other behavioral characteristics of the individuals such as With whom to exchange of HIV Information, Method of coping Your Stress, Alcoholism, Chat addiction, Smoking, Multiple Sex, Suspected Cause of HIV Infection, the factor that pushes to multiple sex, selection of sexual Partners, Leading Factor for unsafe sex, Free exchange of information about condoms, Condom torture during sex, Unsafe sex without condoms and premarital sex are the same across the two categories of respondents whose birth place is Addis Ababa and Nazareth. These variables are not associated not only with the birth place of the respondents but also with the current residence of the respondents, Addis Ababa or Nazareth.

As indicated by the cross tabulation comparison and the chi square test, respondents who reside in Addis Ababa found to be relatively good in openness to exchange HIV related information and the need for professional counseling. In addition, it is found that the relative major suspicion of HIV infection for those respondents who reside in Addis Ababa is unsafe sex while other groups have stated other factors in addition to unsafe sex.

Usual Family Members versus Behavioral Variables. Families are also informal educators of the behaviors of the individual over time. The role of the families on the behavioral change of the individual differs based on the type of the family member one is nurtured such as parents, relatives, help, and spouse. Thus, the major objective of this analysis is to decide if the family member one was used to nurture has influenced behaviors leading to HIV infection. The chi square test has indicated that regardless of the usual family members one is up brought, the behavioral characteristics of the individual such as alcoholism, chat addiction, smoking, counseling, access to HIV information, method of

coping stress, multiple sex, selection of partners, unsafe sex and other behavioral factors have no association with the usual family members

3.2. ANALYSIS OF BEHAVIORAL VERSUS BEHAVIORAL VARIABLES

Some behavior of individuals such as drug addiction; including alcoholism, chat usage and smoking; Free exchange of HIV related information and about condoms and so on do not directly cause HIV infection. But, they cause the person to behave in a way that leads to HIV infection. In other words, they cause another behavior that is susceptible to HIV infection such as multiple sexes, unsafe sex, improper usage of condoms and its torture. These behaviors also cause the individual to be careless to take care of about HIV.

Therefore, to find out the association of the variables those result in other behaviors that are susceptible for HIV infection, the following cross tabular analyses of a pair of variables were carried out. The analysis involves the cross tabulation with a chi square test for the following pairs of variables to decide the existence of association and the strength of association if any. The analysis includes: 1) Multiple sexual behavior versus drug addiction such as alcoholism, chat usage and smoking, 2) Multiple sex behavior versus one's own Interest and Openness to exchange HIV Information, 3) Multiple sexual behavior Versus Free Communication about Condoms, 4) Multiple sexual behavior versus Safe and unsafe sex, 5) Multiple sexual behavior versus Condom torture during multiple sex, 6) Multiple Sexual behavior versus the selection of multiple sex partners and 7) Drug addiction versus condom torture cases, etc

As it is indicated in different literatures, the major cause of HIV infection is multiple sexes without condom. Currently, people are aware of the causes of HIV infection as well as the nature of the epidemic. Media transmission is passing daily information about condom usage and the nature of the epidemic. The intention of this analysis is thus to find unique behavioral characteristics of the HIV patients.

Table 3.12. Frequency Spread of Multiple Sex cases

		Have you ever experienced multiple sex?		
		Frequency	Percent	Cumulative Percent
Valid	Many times	52	52	52.0
	twice	41	41	63.0
	Once	7	7	70.0
	Never	30	30	100.0
	Total	100	100	100.0

One of the unique characteristics of HIV patients is multiple sex without condoms. Seventy percent of the total population has experienced multiple sex once or more than once as indicated in the frequency spread table (table 3.12) above.

Further analysis of Multiple Sex versus Condom usage during multiple has indicated that out of 70 respondents that experience multiple sexes, only one respondent consistently used condom during multiple sex. The remaining 69 of them have experienced multiple sex at least once or more than once.

The analysis of the factor that pushes to multiple sex versus condom usage during multiple sex has indicated that a very great number of respondents 45 percent of those who are pushed to multiple sex are for economic advantage; 30 percent of respondents who are pushed by excessive drug and disappointment never used condom during sex. The chi square test has also indicated that there is association between these variables at a significance level of 0 .05 with degrees of freedom 12.

Further analysis of condom torture cases of the respondents has indicated that 23 respondents have faced condom torture during sex. This is a significant number in relation to the condom advertising that advertises condoms as about 98 percent reliable. Regardless of the electronic test of condom reliability, the practical experience of condom reliability indicates that it is below 78 percent reliable.

3.1.1. MULTIPLE SEXUAL BEHAVIOR VERSUS DRUG ADDICTION

Drug addiction such as alcoholism, chat usage, and smoking though they do not cause direct HIV infection, they cause immediate mental emotionality and mental irrationality which makes the person to decide irrational decisions one of which is multiple sex. Thus the objective of this analysis is to observe if there is any association between multiple sexual

behavior and drug addiction. The analysis first starts by the cross tabulation between multiple sexual behavior and drug addiction.

Multiple Sexes versus Alcoholism. Even though most of the respondents in the table below responded that they are never alcoholic, other significant number of respondents, about half of the sample respondents reported that they at least some times use alcohols while some few others are totally alcoholic. Regardless of the dominant number of the respondents who are never alcoholic, the chi-square test of the interdependence of multi-sexual behavior of the respondents with their alcoholism behavior indicated that multi-sexualism depends on the alcoholism behavior of the respondents. The analysis has indicated that the calculated chi-square value (30.87) is greater than its table value (16.9) at a significance level of .05 and at a degree of freedom 9. Thus, the null hypothesis was rejected and the alternate hypothesis was accepted. The analysis of the degree of association was also made by using Coefficient of Contingency indicated and 48.6 percent at an approximate significance level of 0.05 The strength of association by using both of the measures indicates a moderate strength of association between the two variables.

Cross Tab. 3.13 Multiple sex Versus Alcoholism

			Do you take alcohol?				Total
			No response	Never	Sometimes	Yes	
Multiple Sex	Many times	Count	2	15	25	10	52
		% within Multiple Sex	3.8 %	28.8 %	48.1 %	19.2 %	100.0 %
	twice	Count	0	5	5	1	11
		% within Multiple Sex	.0 %	45.5 %	45.5 %	9.1 %	100.0 %
	Once	Count	0	4	3	0	7
		% within Multiple Sex	.0 %	57.1 %	42.9 %	.0 %	100.0 %
	Never	Count	0	27	2	1	30
		% within Multiple Sex	.0 %	90.0 %	6.7 %	3.3 %	100.0 %
Total		Count	2	51	35	12	100
		% within Multiple Sex	2.0 %	51.0 %	35.0 %	12.0 %	100.0 %

The table also indicates that the 90 percent of the respondents who never take alcohol have never experienced multiple sexes while the majority of those who are alcoholic or sometimes take alcohol have experienced multiple sex many times. The same thing is reported in the chart below.

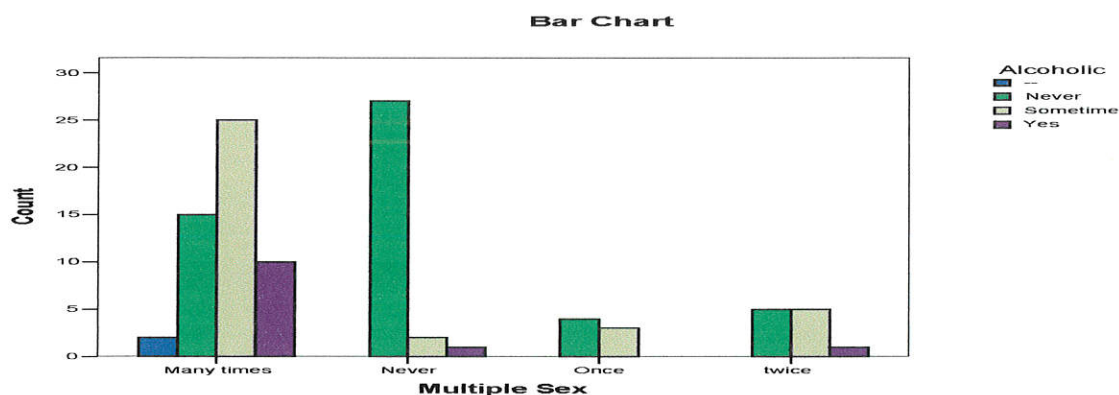


Fig. 3.5 Multiple Sexes versus Alcoholism

Multiple Sexes versus Chat. As shown in the cross tabulation 3.14 below, the number of the respondents who are chat addicted are very few, only 10 percent of the total respondents. The dominant numbers of the respondents have reported that they never chew chat. To accept or reject the null hypothesis “Chat addiction does not affect multi sexual behavior”, the chi square test of the dependence was made. It indicated that the calculated chi square value was 16.19 while its table value is 16.9 at 0.05 significance level with 9 df. Thus the null hypothesis was accepted at a significance level of .05. But the null hypothesis is rejected at 0.10 level of significance. This may be due to the small number of the chat addicted respondents. But it is considerable that almost all of the respondents who are chat addicted have experienced multiple sex many times whereas the dominant number of respondents who never chew chat have never experienced multiples sex or experienced only once or twice only.

Cross Tab. 3.14 Multiple Sex versus Chat usage

			Have You ever chewed Chat?				Total
			Daily	Many times	Some times	Never	
Multiple Sex	Many times	Count	10	1	10	31	52
		% within Multiple Sex	19.2 %	1.9 %	19.2 %	59.6 %	100.0 %
	twice	Count	0	0	2	9	11
		% within Multiple Sex	.0 %	0 %	18.2 %	81.8 %	100.0 %
	Once	Count	0	0	0	7	7
		% within Multiple Sex	0 %	0 %	0 %	100.0 %	100.0 %
	Never	Count	1	0	1	28	30
		% within Multiple Sex	3.3 %	0 %	3.3 %	93.3 %	100.0 %
	Total	Count	11	1	13	75	100
		% within Multiple Sex	11.0 %	1.0 %	13.0 %	75.0 %	100.0 %

Multiple Sexes versus Smoking. Smoking, like other drug addiction reduces the normal functioning of the mind so that the person makes incidental and irrational decisions such as unsafe sex with multiple partners. The motto of this analysis was to technically observe if those respondents who are smokers are more promiscuous than others. Thus, the null hypothesis was 'there is no difference in multi sexual behavior among those smokers and non smokers'. The chi square test has indicated that the null hypothesis is rejected at .05 significance level with 3 degrees of freedom.

Cross Tab. 15 Multiple Sexes versus Smoking

			Are You Smoker?		Total
			No	Yes	
Multiple Sex	Many times	Count	41	11	52
		% within Multiple Sex	78.8 %	21.2 %	100.0 %
		%Within Smoking	47.7 %	78.6 %	52.0 %
	twice	Count	10	1	11
		% within Multiple Sex	90.9 %	9.1 %	100.0 %
		%Within Smoking	11.6 %	7.1 %	11.0 %
	Once	Count	6	1	7
		% within Multiple Sex	85.7 %	14.3 %	100.0 %
		%Within Smoking	7.0 %	7.1 %	7 %
	Never	Count	29	1	30
		% within Multiple Sex	96.7 %	3.3 %	100.0 %
		%Within Smoking	33.7 %	7.1 %	30.0 %
Total	Count		86	14	100
	% within Multiple Sex		86.0 %	14.0 %	100.0 %

Thus the alternate hypothesis there is difference in multi-sexual behavior across smokers and non smokers is accepted. Though the number of smokers as obtained from the sample test is few, the table indicates that the dominant number respondents, who never smoke, 96.7 percent of them, never experienced multiple sex. In other words, 78.6 percent of smokers have experienced multiple sex many times. The remaining who have experienced multiple sex only once or twice are also non smokers. In other word, about 78.6 percent of smokers have experienced multiple sexes. This is an indication that alcoholism has effect on multiples sexual behavior of the respondents.

Pre-marital sex Versus Interest and Openness to exchange HIV information

Out of the total sample population, only 27 respondents reported that they have never made premarital sex. The rest of 71 respondents have faced premarital sex whereas two of them have not responded to the item. This indicates that premarital sex may be a very grave problem related to the spread of the epidemic.

The comparison of these premarital sex cases with the degree of openness and interest of the respondents to discuss about HIV indicates that those respondents who are poor in openness and interest to discuss about HIV have faced premarital sex more than those who are better in openness and interest to discuss the issue.

A chi square test has also indicated that there is a high strength of association between openness and interest of the respondent and premarital sex, 61.3 percent of Contingency Coefficient at an approximate level of significance of .05. The alternate hypothesis to the null hypothesis was accepted at a significance level of .05 with degrees of freedom 16.

Moreover similar analysis if interest and openness to exchange HIV information with condom usage has indicated that those with high interest and openness to discuss HIV information had experienced less premarital sex cases than those with poor interest and openness to exchange information related to HIV. Similarly, the analysis of the condom usage with the free exchange of information about condoms revealed that those who exchange information about condoms tend to use condoms during multiple sexes; the degree of association between these variables is 52.6 and 46.6 percent phi and coefficient of contingency respectively. The test was made at a significance level of .05 with 9 degrees of freedom.

Cross Tab. 3.16 Pre-marital sex Versus Interest and Openness to exchange HIV information

			Interest and Openness to exchange HIV information					
			No Resp.	Very Good	Good	Poor	Very poor	Total
pre-marital sex	No rips.	Count	1	0	0	1	0	2
		% within pre-marital sex	50.0 %	0 %	0 %	50.0 %	0 %	100.0 %
	Many times	Count	0	9	23	19	8	59
		% within pre-marital sex	0 %	15.3 %	39.0 %	32.2 %	13.6 %	100.0 %
	twice	Count	0	1	2	3	2	8
		% within pre-marital sex	0 %	12.5 %	25.0 %	37.5 %	25.0 %	100.0 %
	Once	Count	0	1	0	3	0	4
		% within pre-marital sex	0 %	25.0 %	0 %	75.0 %	0 %	100.0 %
	Never	Count	0	9	7	7	4	27
		% within pre-marital sex	0 %	33.3 %	25.9 %	25.9 %	14.8 %	100.0 %
Total	Count	1	20	32	33	14	100	
	% within pre-marital sex	1.0 %	20.0 %	32.0 %	33.0 %	14.0 %	100.0 %	

Individuals who are freely exchanging information about condoms have faced relatively less premarital sex cases than those who never feel free to exchange information about condoms.

Condom torture during sex Versus Multiple Sex. As indicated in the table below, nine percent of the total respondents faced condom torture many times whereas five and another nine percent of the respondents faced condom torture twice and once respectively. Thus a total of 23 percent of the respondents or 23 of them in number have faced condom torture during sex; out of which 22 of them in number as well as in percentage have experienced multiple sexes.

Cross Tab. 3.17 Condom torture during se Versus Multiple Sex

			Multiple Sex				Total
			Many times	Twice	Once	Never	
Condom torture during sex	No response	Count	5	2	0	3	10
		% within Condom torture during sex	50.0 %	20.0 %	0 %	30.0 %	100.0 %
	Many times	Count	8	0	0	1	9
		% within Condom torture during sex	88.9 %	0 %	.0 %	11.1 %	100.0 %
	twice	Count	5	0	0	0	5
		% within Condom torture during sex	100.0 %	.0 %	0 %	0 %	100.0 %
	Once	Count	8	1	0	0	9
		% within Condom torture during sex	88.9 %	11.1 %	0 %	0 %	100.0 %
	Never	Count	26	8	7	26	67
		% within Condom torture during sex	38.9 %	12.9 %	10.4 %	38.8 %	100.0 %
	Total	Count	52	11	7	30	100
		% within Condom torture during sex	52.0 %	11.0 %	7.0 %	30.0 %	100.0 %

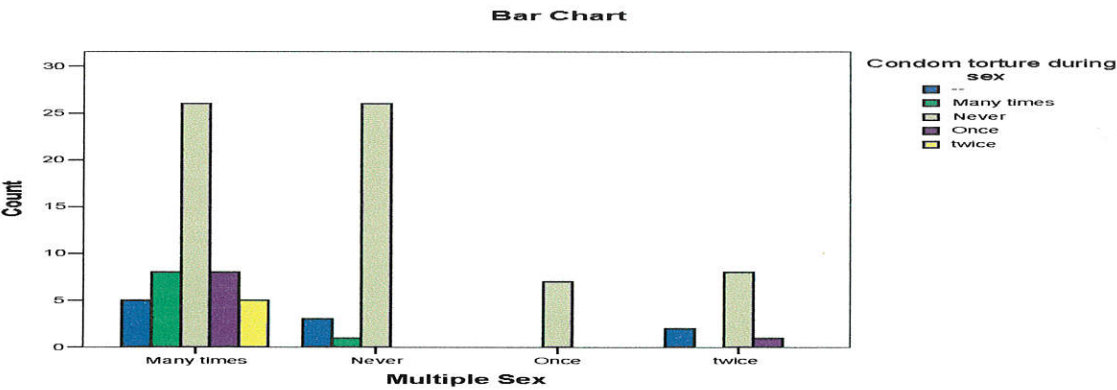


Fig. 3.6. Multiple sex versus condom torture during sex

About 92 percent of the respondents who faced condom torture have experienced multiple sexes once or more than once as it is also indicated in the bar chart, Fig. 3.6 above.

3.1.2. DRUG ADDICTION VERSUS CONDOM TORTURE

Smoking, like other drugs such as chat and alcohol may not cause an immediate emotionality which can make the person to think irrationally. But through time it may cause long lasting effects on mental as well as physiological aspects of the persons. Here, the cross analysis is made to decide whether condom torture is the same across smokers and non-smokers.

The null hypothesis is there is no difference in condom torture across smokers and non smokers. This null hypothesis is accepted at a significance level of .05 with degrees of freedom 4.

Cross Tab. 3.18 Smoking versus Condom torture during sex

			Condom torture during sex					Total
			No Response	Many times	twice	Once	Never	
Smoking	Yes	Count	1	1	1	4	7	14
		% within Smoking	7.1 %	7.1 %	7.1 %	28.6 %	50.0 %	100.0 %
	No	Count	9	8	4	5	60	86
		% within Smoking	10.5 %	9.3 %	4.7 %	5.8 %	69.8 %	100.0 %
Total	Count		10	9	5	9	67	100
	% within Smoking		10.0 %	9.0 %	5.0 %	9.0 %	67.0 %	100.0 %

But, the null hypothesis could have been rejected at a significance level of 0.10. Smokes as well as non smokers are facing condom torture equally as tested by the chi square at .05 significance level and 4 degrees of freedom.

Chat versus Condom torture during sex. Chat as a drug that causes immediate and intense emotionality and abnormal thinking on the individual as soon as it is chewed. As a result persons who chewed chat may decide abnormal decision and they may also act in an abnormal way that they act before chewing chat. One of such abnormal decisions and actions is deciding to make unsafe multiple sex and torture of condoms.

Cross Tab. 3.19 Chat versus Condom torture during sex

			Condom torture cases during sex					Total
			No Response	Never	Once	twice	Many times	
Chat	Never	Count	7	54	4	3	7	75
		% within Chat	9.3 %	72.0 %	5.3 %	4.0 %	9.3 %	100.0 %
	Sometimes	Count	2	9	1	1	0	13
		% within Chat	15.4 %	69.2 %	7.7 %	7.7 %	0.0 %	100.0 %
	Many times	Count	0	0	0	1	0	1
		% within Chat	.0 %	.0 %	.0 %	100.0 %	.0 %	100.0 %
	Daily	Count	1	4	4	0	2	11
		% within Chat	9.1 %	36.4 %	36.4 %	0 %	18.2 %	100.0 %
	Total	Count	10	67	9	5	9	100
		% within Chat	10.0 %	67.0 %	9.0 %	5.0 %	9.0 %	100.0 %

The objective of this analysis is to decide if condom torture is the same across the categories of chat users and non users of chat. The null hypothesis was “there is no difference in condom torture across chat users and non users of chat”. A chi square test was used to accept or reject the null hypothesis. The test has indicated that the null hypothesis has to be rejected at a significance level of .05 with degrees of freedom 12. Thus, the alternate hypothesis was accepted. The degree of association between the two variables is 50.7 at contingency of coefficient at an approximate significance level of .05.

Alcoholic versus Condom torture during sex. Alcohol usage just like chat causes immediate effect on normal thinking of the individual. It increases emotionality of the person which leads to abnormal decisions such as unsafe sex and improper usage of condoms.

The same analysis that is made to chat versus condom torture was made for alcoholism versus condom torture. The analysis has indicated that there is a difference in condom torture across alcoholic and non alcoholic people. This alternate hypothesis of the null hypothesis was accepted at a significance level of .05 with 12 degrees of freedom. The degree of association between the two variables is 52.6 percent at contingency coefficient at .05 an approximates level of significance.

3.1.3. DRUG ADDICTION VERSUS UNSAFE SEX

Just like the association between smoking and condom torture, there is no association between smoking and unsafe sex without condom. As indicated by the chi square test at a significance level of .05 with 4 degrees of freedom, smokers as well as non smokers have experienced unsafe sex. No association between the two variables.

Cross Tab. 3. 20 Chat Versus Unsafe sex without condoms

			Unsafe sex without condoms					Total
			No Resp.	Many times	twice	Once	Never	
Chat	Daily	Count	0	9	1	0	1	11
		% within Chat	.0 %	81.8 %	9.1 %	0 %	9.1 %	100.0 %
	Many times	Count	0	1	0	0	0	1
		% within Chat	.0 %	100.0 %	0 %	0 %	0 %	100.0 %
	Sometime	Count	2	9	1	1	0	13
		% within Chat	15.4 %	69.2 %	7.7 %	7.7 %	.0 %	100.0 %
	Never	Count	5	32	6	1	31	75
		% within Chat	6.7 %	42.7 %	8.0 %	1.3 %	41.3 %	100.0 %
Total	Count		7	51	8	2	32	100
	% within Chat		7.0 %	51.0 %	8.0 %	2.0 %	32.0 %	100.0 %

The table above indicates that as chat usage increases from never through sometimes to daily, the percent age of unsafe sex without condom many times increases from 42.7 percent to 81.8 percent. Respondents that had faced unsafe sex many times are those who are chat addicted. But the chi square test made the researcher to decide to accept the null hypothesis at 12 degrees of freedom with .05 significance level.

Alcoholic versus Unsafe sex without condoms. Unlike the relation between chat and unsafe sex, it is found that there is 47.4 percent strength of association between alcoholism and unsafe sex as determined by the Coefficient of Contingency at an approximate significance level of .05 with 12 degrees of freedom. Thus, the null hypothesis is rejected at significance level of .05 and 12 degrees of freedom.

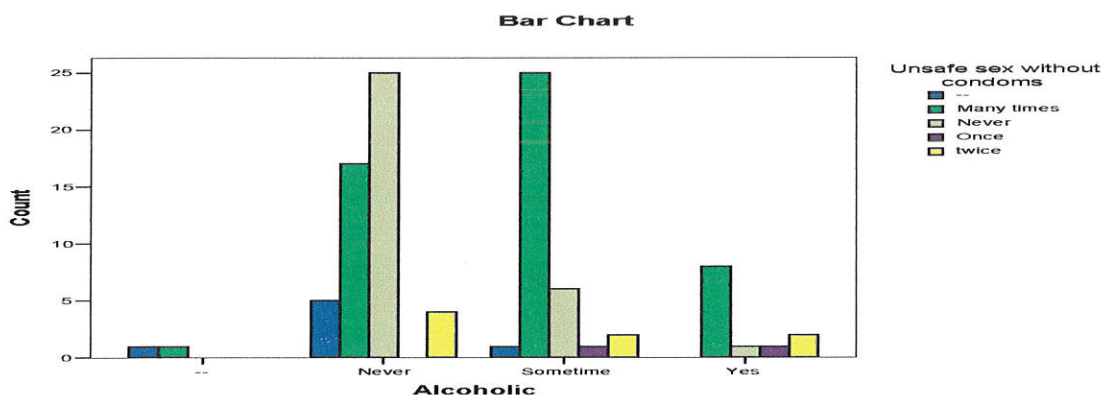


Fig. 3.7 Alcoholic versus sex without condoms

3.3. THE ANALYSIS OF ECONOMIC VARIABLES VERSUS BEHAVIORAL VARIABLES

Humans behave differently to gain economic advantage or to maximize it. Besides, human behavior may be varied because of the existence of sufficient income and economic condition. For example, costly drug addiction such as chat and other may not be practical for those groups whose income is very low. Thus, it was hypothesized that the economic variables such as occupation, average income, education, housing issues and others have a significant association with human behaviors that are susceptible for HIV infection such as drug addiction, multiple sex, unsafe sex, condom torture, etc. To find out if each of these economic variables are associated with each of the behavioral variables stated above, a cross tabulation of the variables with the chi square test and its test of association was made in the following section. The first analysis was made for Occupation versus drug addiction such as alcoholism, Chat addiction, and smoking.

Analysis of Occupation versus Drug Addiction. Alcohol causes permanent physiological as well as immediate irrational mental thought which leads to irrational and emotional decisions such as unsafe sex, improper usage of condoms and multiples sexual behaviors. Alcoholic people expend large amount of their income for alcohols. The source of such income is their occupation. It was here assumed that there is a variation in alcoholism behavior of the respondents across different categories of occupations.

Cross Tab. 3.21 Occupations versus Alcoholism

			Do you take alcohol?				Total
			No Resp.	Never	Sometime	Yes	
Occupation	1	Count	1	7	10	3	21
		% within Occupation	4.8 %	33.3 %	47.6 %	14.3 %	100.0 %
	2	Count	0	19	9	0	28
		% within Occupation	0 %	67.9 %	32.1 %	.0 %	100.0 %
	3	Count	1	1	3	3	8
		% within Occupation	12.5 %	12.5 %	37.5 %	37.5 %	100.0 %
	4	Count	0	14	5	4	23
		% within Occupation	.0 %	60.9 %	21.7 %	17.4 %	100.0 %
	5	Count	0	10	8	2	20
		% within Occupation	.0 %	50.0 %	40.0 %	10.0 %	100.0 %
Total		Count	2	51	35	12	100
		% within Occupation	2.0 %	51.0 %	35.0 %	12.0 %	100.0 %

1= Personal business 2= Employee

3= Taxi Driver

4= Daily laborer

5= others

Alcoholism as a major factor for unsafe sex is cross compared with occupation. The cross comparison has indicated that the majority of the taxi drivers are alcoholic compared to daily laborers and employee who are relatively least alcoholic. 37.5 percent of them who are alcoholic are Taxi drivers, 17.4 percent of them are daily laborers, and 14 percent of them are businessmen. The chi square strength of association is 43.2 percent at approximate significance level of only .05 with 12 degrees of freedom.

Similarly, to decide if occupation has any association with the chat usage, a cross analysis with a chi squares test was made. The analysis has indicated that though only 11 percent of the total sample population is chat addicted, and those that are mainly addicted are business men and taxi drivers 27.3 percent and 37.5 percent of those who are chat addicted respectively. The strength of association is 44.6 percent at sig. level of .05 with 12 degrees of freedom.

The chi square test for occupation versus smoking has also indicted that smoking behavior is different for different groups occupation. That is the null hypothesis that there is no difference in smoking along the occupational groups has bee rejected at a significance level of .025 and at 4 degrees of freedom. The degree of association between the two variables was 31.7 at .05 an approximate level of significance.

As indicated in the cross tabulation, fifty percent out of a total of 14 smokers are of smokers are taxi drivers. The direction of measure from the analysis has also indicated that smoking depends on occupation by 11.5 percent at a significance level of .05.

Occupation versus Behavioral Variables. As tested by the chi square test, interest and openness to exchange HIV information, the party with whom one exchange about HIV and one's own method of coping stress are the same regardless of the type of occupation.

The occupational cross analysis of the respondents over their multi sexual behavior indicatives that out of 30 percent of the respondents who had never experienced multiple sexes, 43.3 percent of them are employees and 23.3 percent of them are daily laborers. On the other hand, Out of 52 percent of the total respondents who had experienced multiple sex many times, 25 percent of them are daily laborers and 46.2 percent of them are business men and employees. But the chi square test has accepted the null hypothesis. Similarly, the chi square test has indicated that there is no difference in suspicion of HIV Infection factor, the types of partners selected, condom usage and Condom torture during sex along the different groups of occupations.

There is no difference in multiple sex cases, Suspicion of the cause of HIV Infection, the Types of Partners selected, and condom usage and condom torture during sex across the different types of occupations. In other words multiple sexes do not depend on occupation as tested by the chi square test at 12 degrees of freedom and .05 significance level.

Average income category Versus Interest and Openness to exchange HIV

information. Openness and interest to exchange about HIV information, Access to HIV information and counseling remain the same regardless of the level of income. The test is made at a significance level of .20 with degrees of freedom 16, 12 and 8 for interest and openness to exchange HIV information, Access to Information and Counseling respectively. Similar analysis has indicated that there is no association between method of coping stress and average income level of the respondents as tested at a significance level of .05 with 12 degrees of freedom.

Average income category versus with whom to exchange of HIV Information

The analysis of the average income category with the party to whom to communicate about HIV related information has indicated that the two variables are associated at the significance level of .05 with 20 degrees of freedom.

Cross Tab. 3.22 Average income category versus with whom to exchange of HIV information

			With whom to exchange of HIV Information						Total
			No Response	all persons	Family	Friends	Nobody	Professionals	
Average income	0-120	Count	3	5	11	6	11	4	40
		% within Average income category	7.5 %	12.5 %	27.5 %	15.0 %	27.5 %	10.0 %	100.0 %
	121-450	Count	0	2	5	4	1	1	13
		% within Average income category	.0 %	15.4 %	38.5 %	30.8 %	7.7 %	7.7 %	100.0 %
	451-850	Count	0	2	3	0	9	0	14
		% within Average income category	.0 %	14.3 %	21.4 %	.0 %	64.3 %	.0 %	100.0 %
	851-1200	Count	2	5	6	3	2	0	18
		% within Average income category	11.1 %	27.8 %	33.3 %	16.7 %	11.1 %	.0 %	100.0 %
	1201+	Count	0	0	5	2	2	6	15
		% within Average income category	.0 %	.0 %	33.3 %	13.3 %	13.3 %	40.0 %	100.0 %
	Total	Count	5	14	30	15	25	11	100
		% within Average income category	5.0 %	14.0 %	30.0 %	15.0 %	25.0 %	11.0 %	100.0 %

The strength of association between the two variables is 54.1 percent by using Coefficient of Contingency at .05 an approximate level of significance. The table above indicates that the majority of the respondents, 30 percent of them communicate with their families and 25 percent of them communicate with nobody. Besides, the table indicated that respondents with the lowest income level tend to communicate HIV information with nobody while those with the highest average income level communicate HIV information with the medical professionals.

Drug Addiction versus Average income category. The chi square indicates that there is no relation between average income categories versus alcoholism, chat and smoking. Regardless of such association, the numbers of respondents who are alcoholic are only 12 percent of the total respondents and the rest 35 percent of the total respondents drink alcohol sometimes. But there is no association between alcoholism behavior and the level of income. The null hypothesis is accepted for the three variables versus average income at a significance level of .05 and at a degree of freedom 12.

Cross Tab 3. 23. Alcoholism versus Average income category

			Average income category					Total
			0-120	121-450	451-850	851-1200	1201- +	
Do you take alcohol?	No Resp.	Count	1	1	0	0	0	2
		% within Alcoholism	50.0 %	50.0 %	.0 %	.0 %	.0 %	100.0 %
	Never	Count	25	4	3	9	10	51
		% within Alcoholism	49.0 %	7.8 %	5.9 %	17.6 %	19.6 %	100.0 %
	Sometime	Count	9	7	9	5	5	35
		% within Alcoholism	25.7 %	20.0 %	25.7 %	14.3 %	14.3 %	100.0 %
	Yes	Count	5	1	2	4	0	12
		% within Alcoholism	41.7 %	8.3 %	16.7 %	33.3 %	.0 %	100.0 %
	Total	Count	40	13	14	18	15	100
		% within Alcoholism	40.0 %	13.0 %	14.0 %	18.0 %	15.0 %	100.0 %

There is not difference in alcoholism, chat usage and smoking behavioral cases along the various income levels of the respondents.

Average income category Versus Multiple Sex. The chi square test has indicated that there is no difference in multiple sexual behavioral characteristics of the respondents across the different categories of income. Thus, the null hypothesis was accepted at the significance level of .05 with 12 degrees of freedom.

Cross Tab 3.24 Average income category Versus Multiple Sex

			Average income category					Total
			0-120	121-450	451-850	851-1200	1201+	
Multiple sex	Many times.	Count	20	7	11	10	4	52
		% within Multiple Sex	38.5 %	13.5 %	21.2 %	19.2 %	7.7 %	100.0 %
	Twice	Count	5	0	1	3	2	11
		% within Multiple Sex	45.5 %	0 %	9.1 %	27.3 %	18.2 %	100.0 %
	Once	Count	2	3	0	2	0	7
		% within Multiple Sex	28.6 %	42.9 %	0 %	28.6 %	0 %	100.0 %
	Never	Count	13	3	2	3	9	30
		% within Multiple Sex	43.3 %	10.0 %	6.7 %	10 %	30 %	100.0 %
	Total	Count	40	13	14	18	15	100
		% within Multiple Sex	40.0 %	13 %	14 %	18 %	15 %	100.0 %

Average income category Versus Partners. It was hypothesized that the selection of the sexual partners is different for different categories of income. As indicated by the chi square test, the hypothesis is accepted at a significance level of .05 with at the degrees of freedom 24. The degree of association between the two variables by Contingent of Contingency is 53.5 percent which is a moderate strength of association at an approximate significance level of .05.

Average income category Versus Leading Factor for unsafe sex

Unsafe sex is the major cause of HIV spread as it is reported by about 70 percent of the respondents. Because of this the researcher is initiated to find out the major causes that lead to unsafe multiple sex. It is found out from the above cross tabulation that the major factor that leads to unsafe multiple sexes for 24 percent of the total respondents is love, while for 17 and 15 percent of them is excessive drug and idleness.

Besides, the table indicates that while love play a dominant role for those with a relatively higher average income, idleness plays a dominant role as a leading factor for unsafe sex for respondents' wit a relatively low average income level. The existence of such association is tested by a chi squares test at a significance level of .05 with 24 degrees of freedom. The strength of association between the two variables by Coefficient of Contingency is 57.8 percent at an approximate significance level of .05.

Average income category Versus Free exchange of information about condoms.

Free exchange of information is the same across the different income categories. This is tested by the chi square test at 12 degrees of freedom with .05 significance level. Similarly, premarital sex, and unsafe sex without condom are the same across the different categories of income as tested by the chi square test at 16 degrees of freedom with .05 level of significance.

Average income category Versus Condom torture during sex.

As indicated in the table above, condom torture cases increase as the income of the respondents increase from birr 60 to birr 1025. But it becomes least at an average income level of above birr 1200.

Cross Tab. 3.25 Average income category Versus Condom torture during sex

			Condom torture during sex					
			No Response	Many times	twice	Once	Never	Total
Average income category	0-120	Count	5	3	1	2	29	40
		% within Average income category	12.5 %	7.5 %	2.5 %	5.0 %	72.5 %	100.0 %
	121-450	Count	3	0	0	1	9	13
		% within Average income category	23.1 %	0 %	0 %	7.7 %	69.2 %	100.0 %
	451-850	Count	1	1	1	4	7	14
		% within Average income category	7.1 %	7.1 %	7.1 %	28.6 %	50.0 %	100.0 %
	851-1200	Count	0	5	1	2	10	18
		% within Average income category	.0 %	27.8 %	5.6 %	11.1 %	55.6 %	100.0 %
	1200+	Count	1	0	2	0	12	15
		% within Average income category	6.7 %	.0 %	13.3 %	0 %	80.0 %	100.0 %
Total			10	9	5	9	67	100
% within Average income category			10.0 %	9.0 %	5.0 %	9.0 %	67 %	100.0 %

The chi square test at .05 significance level with 16 degrees of freedom indicates that there is a difference in condom torture cases among the different income categories of respondents. The test has rejected the null hypothesis, "There is no difference in condom torture along the different income categories". The degree of association between these two variables is 46.3 percent at .05 approximate level of significance.

Educational Level versus Interest and Openness to exchange HIV information

Education is the change in behavior of the individuals in terms of knowledge, attitude and skill. A more educated person has more knowledge, skill and rational attitude towards people and other things. As a result it was hypothesized in alternate to the null hypothesis that the more educated people have are more interested and open to exchange HIV information than those with a relatively less educational level.

The null hypothesis, "There is no difference in interest and openness to exchange HIV information", is accepted instead of its alternate hypothesis though a chi square test at a significance level of 0.05 with 20 degrees of freedom.

Regardless of the chi square test, the cross tabular analysis of the two variables has indicated that the majority of the respondents, about 40 percent of them, were at the high school level. Out of the total respondents, 33 percent of the respondents are poor in interest and openness to exchange HIV information while 32 percent of them are good. Out of the 33 percent of

Educational Level versus Multiple Sex and Suspected Cause of HIV infection

The multi sexual behavior of the respondents seems the same across all educational levels. To answer this question a hypothesis was set that the multi sexual behavior of the respondents is the same across all the educational levels. The hypothesis test by using a chi square tests and its test of association has indicated that there is no association between these variables. That is all groups in different educational level experienced multiple sex equally.

Cross Tab. 3.28 Multiple Sexes versus Educational Level

			Educational Level						Total
			0-6	7-8	9-12	Diploma	Degree	Masters & above	
Multiple Sex	Many times	Count	12	6	22	11	1	0	52
		% within Multiple Sex	23.1 %	11.5 %	42.3 %	21.2 %	1.9 %	.0 %	100.0 %
	twice	Count	2	3	2	1	2	1	11
		% within Multiple Sex	18.2 %	27.3 %	18.2 %	9.1 %	18.2 %	9.1 %	100.0 %
	Once	Count	2	0	3	1	1	0	7
		% within Multiple Sex	28.6 %	.0 %	42.9 %	14.3 %	14.3 %	.0 %	100.0 %
	Never	Count	6	4	12	3	3	2	30
		% within Multiple Sex	20.0 %	13.3 %	40.0 %	10.0 %	10.0 %	6.7 %	100.0 %
	Total	Count	22	13	39	16	7	3	100
		% within Multiple Sex	22.0 %	13.0 %	39.0 %	16.0 %	7.0 %	3.0 %	100.0 %

But the table also indicates that out of 52 percent of the respondents who experienced multiple sexes, 42.3 percent of them are at the high school level; 23.1 percent of them are at the lowest educational level and 21.2 percent of them are at the Diploma level. The cross analysis of the educational level versus the suspected cause for HIV infection has also indicated that there is no difference in the cause of HIV infection on different educational levels. Though the majority of the populations who are experiencing multiple sexes are those at the high school level due to age factor, the level of education by itself has no effect on the multiple sexual behaviors of the respondents next those who are not educated.

Educational Level versus Unsafe multiple sex and condom torture. Out of the total respondents who have reported about condom usage during their multiple sexual act, only one person always uses condom but the rest 27 of them have never used it and remaining 34 of them use it sometimes. The majorities of high school students never use it or only sometimes use it. The behavioral change in terms of condom usage remains almost

Housing versus Drug Addiction, Multiple Sexual Behaviors. To find out the economic impact on the drug addiction on the respondents, the various drugs such as alcohol, chat and smoking are cross tabulated and compared. As indicated by the chi square analysis at a significance level of .05 and above, the alcoholism, chat usage and smoking behaviors of the respondents are the same regardless of whether one lives in personal, rented or governmental houses.

Housing has both an economical as well as social impact on the society. As indicated in the cross tabulation above, out of 52 percent of respondents who experience sex, the majority of them, 40.4 percent live in a rented house, 32.7 percent of them live in personal house and 23.1 percent of them live in governmental house. The dominant number of respondents in all housing groups suspects that unsafe sex as the major cause of their HIV infection.

The cross tabulation between housing the factor that pushes to multiple sex has indicated that the majority of the respondents living both in personal and rented house reported that the major cause that pushes them towards unsafe sex is sexual satisfaction. Next to the need for sexual satisfaction, some significant numbers of the respondents who live in personal house are pushed to unwanted sex because of excessive drugs. Some significant numbers of respondents who live in a rented house have also reported that they are pushed to multiple sexes because of idleness.

But the chi square analysis indicated that there is no difference in multiple sexual behaviors of the respondents regardless of whether they live in rented, personal or governmental house across. The test was made at the significance level of .05 with degrees of freedom 12.

Housing versus Partners. Regardless of the housing issue whether it is personal, governmental, rented or the other, the selection of the types of the partners remains the same as indicated by the chi square analysis at significance level of .05 with degrees of freedom 12.

Thus sex education is required for all groups housing to reduce their sexual act with the commercial sex workers. As human sex is not a reflex action like other animals, attitudinal changes have to be brought on the respondents.

Housing versus Leading Factor for unsafe sex. Idleness is obtained to be an insignificant factor for unsafe sex to those who live in personal house but it is significant factor for those who live in rented and governmental house. On the other hand, love and excessive drug are the major factors for those who live in both personal and rented houses. The chi square test has indicated that there is no difference in the leading factor for unsafe sex over the different types of housing categories. This test is made at 24 degrees of freedom with at .05 significance level.

Housing versus Unsafe sex without condoms. Housing as a social issue may cause some effects on sexual behavior of the individuals such as unsafe sex. The analysis of housing versus unsafe sexual experience of the respondents has indicated the dominant number of respondents 40 percent of them reside in personal house, 32 percent of them reside in rented and 23 percent of them reside in governmental house. As it is indicated in the table, unsafe sex is mostly peculiar to individual who reside in governmental house and rented house.

Cross Tab. 3.29 Housing versus Unsafe sex without condoms

			Have you ever experienced Unsafe multiple sex?					
			No Response	Many times	twice	Once	Never	Total
Housing	Consigned	Count	1	0	0	0	0	1
		% within Housing	100.0 %	.0 %	0 %	.0 %	.0 %	100.0 %
	Governmental	Count	0	15	1	0	7	23
		% within Housing	0 %	65.2 %	4. %	.0 %	30.4 %	100.0 %
	Personal	Count	5	14	6	1	14	40
		% within Housing	12.5 %	35.0 %	15.0 %	2.5 %	35.0 %	100.0 %
	Rented	Count	0	21	1	1	9	32
		% within Housing	0 %	65.6 %	3.1 %	3.1 %	28.1 %	100.0 %
	Street Life	Count	1	1	0	0	2	4
		% within Housing	25.0 %	25.0 %	0 %	0 %	50.0 %	100.0 %
Total		Count	7	51	8	2	32	32
		% within Housing	7.0 %	51.0 %	8.0 %	2.0 %	32.0 %	100.0 %

On the other hand, unsafe sex is relatively less but significant for both individual who reside in personal housing in living in streets. The chi square test has indicated that there is association between these variables as tested at a significance level of .05 and degrees of freedom 16. The degree of association between these variables is also 48.7 percent Coefficient of Contingency at an approximate significance level of .05.

3.4. ANALYSIS OF SOCIO-CULTURAL VERSUS BEHAVIORAL VARIABLES

Suspected Cause of HIV Infection versus Nurturing. The behavior of the individuals is shaped by two categories of factors: nature and nurture. Nurturing here implies the way how an individual is up brought by his or her family. Thus the way of nurturing the individuals has a great effect on the future behavioral attributes of an individual, one of which is behaviors that lead of HIV infection such as multiple sexes without condoms.

As a result, it was hypothesized that the suspicion about the cause of HIV infection differs across the different categories of nurturing. But, according to the chi square test made to decide to accept or reject the hypothesis at a significance level of .05 and degrees of freedom 9, the above hypothesis was rejected and the null hypothesis was accepted.

The frequency spread of the respondents over their suspected cause of HIV infection has indicated that the majority of the respondents above 70 percent have suspected that the causes their HIV infection is unsafe sex. Regardless of the nurturing of the respondents, most of the respondents suspect that unsafe sex is the major cause of their HIV infection. By using the chi square analysis, the null hypothesis "The suspicion for the infection by HIV is the same regardless of the nurturing: is accepted at a significance level of .05 with degree of freedom 9.

Counseling versus Nurturing. Regardless of effectiveness of nurturing that the respondents are up brought, most of the respondents, about 80 percent of them have been counseled in hospitals and VCT centers. This was evidenced by the chi square analysis of the cross tabulation of the respondents at .05 degree of significance and at 6 degree of freedom. The degree of association between the two variables is also very weak, only 19.9 percent at the approximate significance level of .05

Nurturing Versus Method of coping Your Stress. Regardless of the effectiveness of nurturing that the respondents are up brought, the dominant number of the respondents, 47 percent of them communicate the problem with the counselors and 24 percent of them with their families and 22 percent of them by taking excessive drugs. Out of the 22 percent of the respondents who take excessive drugs to solve their problems, 66

percent of them are nurtured very poorly and 20 percent of them poorly. The chi square analysis has indicated that the association between nurturing and method of coping stress is very weak, only 34.5 percent at approximate sig. level of .14. This may be as a result of the dominant number of respondents that responded their stress coping mechanism as discussion with the counselors regardless of nurturing. A very few number of respondents use excessive drugs as a mechanism of coping stress which may be related to nurturing.

Cross Tab. 30 Nurturing versus Method of coping Stress

			Method of Coping Stress					
			Family discussion	discussing with friends	discussing with counselor	preying	taking Excessive drug	Total
Nurturing	Neglected	Count	1	0	1	2	2	6
		% within Nurturing	16.7 %	.0 %	16.7 %	33.3 %	33.3 %	100.0 %
	Poor	Count	3	3	6	3	0	15
		% within Nurturing	20.0 %	20.0 %	40.0 %	20.0 %	.0 %	100.0 %
	Good	Count	9	3	20	6	3	41
		Within Nurturing	22.0 %	7.3 %	48.8 %	14.6 %	7.3 %	100.0 %
	Very good	Count	11	2	20	2	3	38
		% within Nurturing	29.7 %	2.7 %	54.1 %	5.4 %	8.1 %	100.0 %
Total	Count		24	8	47	13	8	100
	% within Nurturing		24.0 %	8.0 %	47.0 %	13.0 %	8.0 %	100.0 %

The major reason for poor nurturing as reported by the respondents is poverty followed by lack of free communication.

Chat Versus Nurturing. The number of respondents who chew chat many times are very few only, one percent of the total respondents. Only 13 percent of the total respondents chew chat some times and only 11 percent of them are chat addicted who chew chat daily. 54.5 percent of those who are chat addicted are better nurtured and only 27 percent of them are poorly nurtured. The majority of the respondents, 75 percent of them that never chew chat nurtured in a very good way by their families.

This implies that those respondents who are nurtured poorly tend to chew chat and those that are nurtured in a very good or good ways tend to never used chat. This association was tested by the chi square test of association which indicated the contingency coefficient of 41.3 % which is moderate strength of association at an approximated significance level of .05. The major cause of poor nurturing as reported by the respondents is poverty followed by lack of free communication within the family.

Cross Tab. 3.31 Chat versus Nurturing

			Nurturing				Total
			Neglected	Poor	Good	Very Good	
Chat	Never	Count	3	10	30	32	75
		% within Chat	4.0 %	13.3 %	40.0 %	42.7 %	100.0 %
	Sometime	Count	1	2	5	5	13
		% within Chat	7.7 %	15.4 %	38.5 %	38.5 %	100.0 %
	Many times	Count	1	0	0	0	1
		% within Chat	100.0 %	0 %	0 %	0 %	100.0 %
	daily	Count	1	3	6	1	11
		% within Chat	9.1 %	27.3 %	54.5 %	9.1 %	100.0 %
Total	Count	6	15	41	38	100	
	% within Chat	6.0 %	15.0 %	41.0 %	38.0 %	100.0 %	

The majority of the respondents, 86 percent of them are not smokers. Only 14 percent of them are smokers. This implies that smoking is not the major cause of HIV infection. In addition, a very weak degree of association, only 24 percent contingency coefficient, nurturing does not result in smoking as indicated by the chi square test and its test of association. In general, 54.5 percent of chat usage and its addiction results from poor nurturing. On the other hand, smoking is not caused by poor nurturing.

Multiple Sexes versus Nurturing. Some people think of sex as a basic need while others think it as a want which can be controlled by humans unlike animals whose sexual need is derived by reflex action. Some people contend that multiple sex is especially a habit developed by a continuous multi sexual practices during his or her nurturing.

Cross Tab. 3.32 Multiple sex Versus Nurturing

			Nurturing				Total
			Neglected	Poor	Good	V. Good	
Multiple Sex	Many times	Count	4	10	24	14	52
		% within Multiple Sex	7.7 %	19.2 %	46.2 %	26.9 %	100.0 %
	twice	Count	1	1	5	4	11
		% within Multiple Sex	9.1 %	9.1 %	45.5 %	36.4 %	100.0 %
	Once	Count	1	1	2	3	7
		% within Multiple Sex	14.3 %	14.3 %	28.6 %	42.9 %	100.0 %
	Never	Count	0	3	10	17	30
		% within Multiple Sex	.0 %	10.0 %	33.3 %	56.7 %	100.0 %
Total	Count	6	15	41	38	100	
	% within Multiple Sex	6.0 %	15.0 %	41.0 %	38.0 %	100.0 %	

The frequency distribution of multiple sexual cases has indicated that above 70 percent of the respondents have experienced multiple sexes. As a result it was suspected that nurturing

might have some association with multiple sexual behaviors of the respondents. However, the chi square test has proved that the null hypothesis, “there is no association between nurturing and multiple sexual behavior” is accepted at 9 degree of freedom with .05 significance level.

The factor that pushes to multiple sex Versus Nurturing. The major cause that pushes those respondents who are nurtured poorly towards sex is economic advantage or disappointment with their families whereas the primary factor that pushes those nurtured in a good way towards multiples sex is sexual satisfaction. This is evidenced by a chi square test as well as its test of association, 52.25 percent at .05 level of significance with 18 degrees of freedom.

Cross Tab. 3.33. The factor that pushes to multiple sex Versus Nurturing

			Nurturing				Total
			Neglected	Poor	Good	V. Good	
the factor that pushes to multiple sex	No Resp.	Count	0	1	13	16	30
		% within the factor that pushes to multiple sex	.0 %	3.3 %	43.3 %	53.3 %	100.0 %
	Sexual Satisfaction	Count	1	7	14	7	29
		% within the factor that pushes to multiple sex	3.4 %	24.1 %	48.3 %	24.1 %	100.0 %
	Love	Count	0	0	7	4	11
		% within the factor that pushes to multiple sex	.0 %	.0 %	63.6 %	36.4 %	100.0 %
	Econ Adv.	Count	1	4	2	4	11
		% within the factor that pushes to multiple sex	9.1 %	36.4 %	18.2 %	36.4 %	100.0 %
	Excessive Drug	Count	2	0	3	5	10
		% within the factor that pushes to multiple sex	20.0 %	.0 %	30.0 %	50.0 %	100.0 %
	Disappointment	Count	2	2	0	2	6
		% within the factor that pushes to multiple sex	33.3 %	33.3 %	.0 %	33.3 %	100.0 %
	Others	Count	0	1	2	0	3
		% within the factor that pushes to multiple sex	.0 %	33.3 %	66.7 %	.0 %	100.0 %
Total		Count	6	15	41	38	100
		% within the factor that pushes to multiple sex	6.0 %	15.0 %	41.0 %	38.0 %	100.0 %

The chi square test also indicated that there is no association between nurturing and the type of partners that are selected for multiple sexes at a significance level of .442 with degrees of freedom 18.

Leading Factor for unsafe sex Versus Nurturing. It was suspected that poor nurturing may result in some other factors leading to unsafe sex. However, the chi square test of association has indicated that there is no association between unsafe sex and factors that lead to unsafe sex such as depression at a significance even at a significance level of .05 and 18 degrees of freedom.

Chat Versus rape. There is very weak association between chat usage and rape. This may be because of a very few cases of raped respondents in a sample. This implies that rape is not the major cause for the spread of HIV infection in Addis Ababa and Nazareth. In addition it indicates that there is no association between rape and chat usage. The degree of association between these two variables is only 18.3 percent.

Condom usage during multiple sex Versus Nurturing. In real terms, nurturing has many social impacts on the individual. The overall personality of an individual is a result of nurture as well as nature. As a result, it was hypothesized that nurture has impact on condom usage during multiple sex. But, the chi square test has indicated that nurturing has no any association with the condom usage of individuals as tested at a significance level of .05 and degrees of freedom 9.

Condom usage during multiple sex Versus rape. Similarly, there is no association between condom torture cases and rape as tested by the chi square test at .05 level of significance and 12 degrees of freedom. Rape cases as reported by the respondents is very few, only seven percent of the total samples. But the chi square analysis has shown that there is association between condom usage and rape, 45.8 percent by using Contingency Coefficient. The alternate hypothesis to the null hypothesis, there is association between the rape cases and condom usage has been accepted at a significance level of .05 with degrees of freedom 9.

CHAPTER – IV

MAIN FINDINGS AND DISCUSSION

4.1. DEMOGRAPHIC FACTORS ASSOCIATED WITH THE HIV SUSCEPTIVE BEHAVIORS

Marital status versus Behavioral Factors

- Married people are poorer in interest and openness to exchange about HIV than others. The strength of association computed was 34.1 percent Coefficient of Contingency.
- Drug addiction is the same across all the categories of marital statuses, 26 percent, 30 percent and 24 percent for marital status versus alcoholism, marital status versus chat and marital status versus smoking respectively. Drug addiction such as alcoholism, chat usage, and smoking though they do not cause direct HIV infection, they cause immediate mental emotionality and mental irrationality which makes the person to decide irrational decisions one of which is multiple sex. In spite of this, the analysis indicated that the association of drug addiction is the same across different categories of marital statuses. This finding opposes the media presentation by Geraldo, 1998 in South Africa which presents drug abuse as the main cause for HIV/AIDS for the general population of Africa where the sexual characteristic is mainly heterosexual unlike developed countries.
- The majority of the unmarried people about 72 percent of them have experienced multiple sexes many times than other categories of marital statuses. It seems that though sex is usual for all persons, multiple sexes may not be usual for all people. It is also a serious behavior that leads to HIV infection. This finding matches the usual expectation of the researcher and the expectation of the others too.
- Those who are unmarried are pushed to multiple sexes partly by their need for sexual satisfaction and economic advantage from their partners while those who are married are mainly pushed by the need for sexual satisfaction and love, 34.7 percent degree of association contingency Coefficient. The finding matches the report of the WHO, 1998 about the exchange of sex with money termed as “sugar mummy and sugar daddy relationships” where unmarried people are engaged in multiple sexes for economic advantage.

- Pre-marital sex is dominant amongst unmarried respondents. 75 percent of unmarried respondents had experienced premarital sex. Premarital sex another social factor that leads to HIV infection. Since it usually occurs at lower age level where the individuals are not mentally and physically mature, it may cause a great effect in all social economic and personal issues of the individuals. One of such problems that may be caused by premarital sex is HIV infection, 44.8 percent of association at an approximate significance level of .05. Different researchers stated that premarital sex increases the multiples sexual cases of the individuals that to reduce multiple sexual behaviors they recommend to reduce the premarital sexual behavior of individuals.
- 38 percent of married persons have experienced condom torture cases while only 32 percent of the unmarried persons faced it, 29 percent degree of association. This implies that there is problem of condom usage among married persons than other groups of people based on marital status. The current researcher hasn't found any literature review about the condom torture cases based real condom usage rather than laboratory tests.

Sex versus Behavioral Variables

- Access to HIV information, Counseling and the party with whom one exchanges HIV information are the same along both males and females. But, Interest and openness, access to HIV information, counseling and the party with whom one exchanges HIV information are some of the social variables that may affect the social behavior of an individual according to the expectation of individuals and various literatures.
- Males are more drug addicted than females as indicated by the cross tabular analysis. 38.2 for alcoholism at significance level of .05, 41.4 percent at approximate significance level of .05 for chat and 32.2 percent for smoking at an approximate significance level of .05. According to the presentation in media release in South Africa, seroprevalence studies indicated that more homosexual men and fewer of the general population had diagnosed with HIV in developed countries, while the opposite is true for the African population, especially in East and Central Africa ("<http://en.wikipedia.org/wiki>). Geraldo argued that among male homosexuals the main cause of AIDS is drug abuse. The current finding matches the argument of Geraldo, 1998.

- Even though the number of females is greater than the number of females in the sample population, males experience more multi sexual cases and premarital sex than females. 79.5 percent of males have experienced premarital sex many times unlike to only 42.9 percent of females who experienced premarital sex many times. Similarly, 68.2 percent of males had experienced unsafe sex, 42.3 percent of association at .05 an approximate level of significance. As notified by different literatures and medical journal and magazines, the major cause of HIV infection is unsafe sex with multiple partners. The strength of association between the two variables was computed by using a contingency Coefficient which was 33.1 percent at approximate significance level of .05. This finding is the same as the result of different researcher that estimates that 60-80 percent of females who are HIV positive had sex solely with their husbands. As stated by Shishana, 1995 there is miss-conception of HIV being as “women’s disease and women as most promiscuous group than men”. The current finding contradicts such misconception. It indicates that men are more promiscuous than women regardless of the great factor of the women’s biological factor that keeps them most susceptible to the epidemic.
- The major factor that pushes 47.7 percent of males towards multiple sexes is sexual satisfaction. But the major factor that pushes the majority of female respondents, 17.9 percent of them, toward multiple sexes is economic advantage whereas only 14.3 percent of them are driven by the need for sexual satisfaction. This finding suits the report of World Health where females are driven to sex for economic advantage.
- The dominant sexual partners for about 90 percent of males are commercial sex workers while those of females are incidental persons and neighborhoods, 51.5 percent degree of association. This finding may be the result of the gender inequality and social value system where females have no more access to sex with commercial sex workers for different reasons. According to the report of the HIV prevalence among commercial sex workers, 54 percent of them are HIV positive. Thus, the males’ selection of the commercial sex workers may aggravate the problem.

- The unsafe and safe multi sexual cases are the same across male as well as female groups. That is above 60 percent of both males as well as female groups experienced unsafe sex proportionately. Many authors in their literature argue that females are discouraged to condom usage due to social value than males. But the finding here opposes it. According to the macro international DHS surveys, which are used by a whole range of agencies, condom are used between 60-80 percent of the case of the first sexual act in USA and Europe, compared to 14 percent in South Africa. Thus, the current finding matches this survey since 70 percent of multiple sexual cases as it is found in the analysis are with out condoms.

Age versus Behavioral Variables

- The cross analysis of age with other behavioral variables such as interest and openness to discuss about HIV information, Unsafe sex, Access to HIV information, Condom torture during sex, Counseling cases, drug addiction and the party with whom the respondents exchange HIV related information has indicated that these variables are not associated with age. That is they are the same regardless of the difference in age categories.
- The age versus the factor that pushes to multiple sexes has indicated that the majority of the respondents in the average age group of 34 years are pushed to multiple sexes as a result of the need for sexual satisfaction while the dominant numbers of those at an average age group of 23 years are pushed by excessive drug intake.
- The behavioral variables such as the selection of sexual partners, leading factor for unsafe sex, condom usage during multiple sex, free exchange of information about condoms and premarital sex cases have no difference across the different age categories as tested at the significance level of .05 with degrees of freedom 12.
- The suspicion of the respondents is different for different age groups. 100 percent of the respondents at an average age group of 12 years, 84 percent of those at the average age group of 23 years, 71.7 of those at the average age group of 34 years, 66.7 percent of those at the age group of 45 years and zero percent of those in the age group of 56 years suspect unsafe sex as cause of HIV infection. Thus as age increases, the suspicion of unsafe sex as a cause of HIV infection decreases.

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- The multi sexual behavior among the HIV patients is dominant at an average the age groups 34 years (29-39 years). It is also relatively dominant in the average age groups of 23 years (18-28) and in average age groups of 45 years (40-50 years). In general, the multi sexual behavior is dominant in the adult group of the population. This age group is also dominantly experiencing unsafe sex. According to the report in other countries such as Kuwazulu, and UNAID 2004 report of Ethiopian HIV prevalence is was reported to be dominant in the age group pf 20-29 years which is opposite to Ethiopia where HIV spread is mainly in the age group of 29-39 years according to the current finding. The finding also opposes the age factor analysis result of the different literatures which concludes that 15-24 age group of people as the HIV disposed persons in most developing countries. The result may be due to the strict social control on the school age groups in Ethiopia unlike other countries' social system. Ethiopians are infected by HIV at the late age at adult stage than other countries. But the chi square test has indicated that the age has no association with the condom torture cases of the respondents.

Birth Place versus Behavioral Variables

- Openness to exchange HIV information, the need for counseling and suspected cause of HIV infection, are tested to be different for different groups of respondents in terms of birth place as well as residence as tested by the chi square test at a significance level of .05 with 4 degree of freedom. The degree of association between these variables is 38 percent at an approximate significance level of .05. People in Addis Ababa are more open to discuss about HIV matters and have better need for counseling than people in Nazareth. This reflects individual differences in HIV infection due to differences in social value and culture as indicated by Jejeebhay, 1998.
- Behavioral characteristics of the individuals such as With whom to exchange of HIV Information, Method of coping Your Stress, Alcoholism, Chat addiction, Smoking, Multiple Sex, Suspected Cause of HIV Infection, the factor that pushes to multiple sex, selection of sexual Partners, Leading Factor for unsafe sex, Free exchange of information about condoms, Condom torture during sex, Unsafe sex without condoms and premarital sex are the same across the two categories of respondents whose birth

place is Addis Ababa and Nazareth. These variables are not associated not only with the birth place of the respondents but also with the current residence of the respondents, Addis Ababa or Nazareth.

Usual Family Members versus Behavioral Variables

- Regardless of the usual family members one is up brought, the behavioral characteristics of the individual such as alcoholism, chat addiction, smoking, counseling, access to HIV information, method of coping stress, multiple sex, selection of partners, unsafe sex and other behavioral factors remain the same across all categories of respondents with different usual family members.

4.2. BEHAVIORAL VERSUS BEHAVIORAL VARIABLES

- Seventy percent of the sample population has experienced multiple sexes with more than one partner once or more than once and all of them who experienced multiple sex suspect unsafe sex as a major cause for their HIV infection. Besides out of 70 respondents, who have experienced multiple sexes, all except one respondent have made sex without condom once or more than once and 23 percent of them have experienced condom torture once or more than once during multiple sex. A puzzling bit of information from the literature review was the repeated claims that AIDS has wiped out whole villages in Africa in a matter of weeks or months, whereas nothing like that had ever happened in the USA or anywhere else, even among the most sexually promiscuous society that ever existed – i.e. people that frequented homosexual night-clubs and bath houses in San Francisco, New York and Los Angeles in the 1980s. The current researcher hopes that the reason for such puzzle in Africa and Ethiopia is unsafe sex. Condom usage is strongly associated (52.2 percent) with the multiple sexual experiences. The unsafe sexual experience case of the respondents is more as the multiple sexual experience increases.
- Further analysis of condom torture cases of the respondents has indicated that 23 respondents have faced condom torture during sex. This is a significant number in relation to the condom advertising that advertises condoms as about 98 percent reliable. Regardless of the electronic test of condom reliability, the practical experience of condom reliability indicates that it is below 78 percent reliable.

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MULTIPLE SEXUAL BEHAVIORS VERSUS DRUG ADDICTION

- It is found that there is a significant association 48 percent of association between alcoholism and multiple sexes and multiple sexes versus smoking, 67.4 percent. But there is no association between chat usage and multiple sexes. As stated by many of the researchers, drug addiction is one of the major causes of HIV suspected behaviors.
- The factor that pushes towards sex for the majority of respondent is the need for sexual satisfaction. The rest of about 32 percent the respondents are pushed to multiple sexes for economic advantage, excessive drug and disappointment. 32 percent of respondents who are pushed by excessive drug and disappointment never used condom during sex. As stated by many researchers, economic disparity is playing a role for multiple sexual behaviors of the respondents.

Interest and Openness to exchange HIV information versus pre-marital sex

- Those who are able to communicate about condoms are relatively experiencing safe sex while those who are not good to communicate about condoms are experiencing unsafe sex (43 percent of association). But, the parties with whom an individual exchanges information about HIV access to HIV related information one's own method of coping stress have no relation with suspected cause of HIV infection. The majority of respondents that are pushed by strong love and proximity and the need for sexual satisfaction never use condom during sex. Communication is greatly important tool to solve problems in a social setting. It enables the individuals to share ideas and make compromises. Individuals who are able to communicate freely about condoms and HIV related issues have better access to experience safer sex than those who are unable to do so. In addition, due to strong love and proximity, some individuals are experiencing unsafe sex without condom based on belief than depending on HIV pretest in medical and VCT centers on their partners.
- Individuals who are freely exchanging information about condoms have faced relatively less premarital sex cases than those who never feel free to exchange information about condoms, the degree of association between these variables so 46.6 percent coefficient of contingency.

Multiple Sexes versus Condom torture during sex

- A total of 23 percent of the respondents or 23 of them in number have faced condom torture during sex out of which 22 of them in number as well as in percentage have experienced multiple sexes. About 92 percent of the respondents who faced condom torture have experienced multiple sexes once or more than once. Condom torture is more for those whose sexual partners are incidental persons followed by sexual workers. It is strongly associated with the number of multiple sexual cases of an individual. Condom torture is not associated with smoking but, it is significantly associated with chat and alcoholism 50.7 percent 52.6 percent respectively. Condom torture is the same across different categories of occupations and counseling cases.
- Interest and openness to exchange HIV information and free exchange of HIV related information have a high strength of association (61.3 percent 56 percent respectively) with premarital sex. In addition the very great numbers of respondents, 78 percent of those who suspect unsafe sex as their cause of HIV infection have faced premarital sex (48.3 percent).

Drug Addiction versus Condom torture during sex

- Smokes as well as non smokers are facing condom torture equally. The analysis of Alcoholism versus Condom torture during sex has indicated that there is a difference in condom torture across alcoholic and non alcoholic people, 52.6 percent of association at contingency coefficient.

Drug Addiction versus Unsafe Sex

- Unlike the relation between chat and unsafe sex, it is found that there is 47.4 percent strength of association between alcoholism and unsafe sex as determined by the Coefficient of Contingency at an approximate significance level of .05 at 12 degrees of freedom.

4.3. ECONOMIC VARIABLES VERSUS BEHAVIORAL VARIABLES

Different literatures indicate that economic disparity is one of the major causes of the spread of HIV. The cross comparison of the economic factors such as average level of income, occupation, educational level with the behavioral variables has indicated the following findings.

Analysis of the Occupation versus Drug Addiction.

- Fifty percent out of a total of 14 smokers are of smokers are taxi drivers. The direction of measure from the analysis has also indicated that smoking depends on occupation by 11.5 percent at a significance level of .05.
- Alcoholism, chat addiction and smoking are associated with occupation with strength of 43.2, 44.6 and 31.7 percents respectively. Taxi drivers and businessmen are more drug-addicted than other occupational groups.
- There is no difference in multiple sex cases, Suspicion of the cause of HIV Infection, the Types of Partners selected, and condom usage and condom torture during sex across the different types of occupations as tested by the chi square test at 12 degrees of freedom with .05 significance level.

Average income category Versus Behavioral Variables

- Openness and interest to exchange about HIV information, Access to HIV information, method of coping stress and counseling remain the same regardless of the level of income. Similar analysis has indicated that there is no association between method of coping stress and average income level of the respondents.
- Respondents with the lowest income level tend to communicate HIV information with nobody while those with the highest average income level communicate HIV information with the medical professionals, 54.1 percent strength of association. But, there is not difference in alcoholism, chat usage and smoking behavioral cases along the various income levels of the respondents.

- Average income of respondents is associated with multiple sex behavior, suspected cause of HIV with of the respondents at 41.4 percent and 40 percent respectively. But it has no association with condom usage and premarital sex. It is also associated with condom torture at 46.3 percent
- While love play a dominant role for those with a relatively higher average income, idleness plays a dominant role as a leading factor for unsafe sex for respondents' with a relatively low average income level. The strength of association between the two variables by Coefficient of Contingency is 57.8 percent at an approximate significance level of .05. The solution to reduce the spread of HIV among low income groups as stated by (Vasconceles et al, 1993) is that meeting immediate needs and developing self-confidence of street children, and young those all with low income level will help them protect themselves from the risks of HIV infection.
- Free exchange of information is the same across the different income categories. Similarly, premarital sex, and unsafe sex without condom are the same across the different categories of income as tested by the chi square test at 16 degrees of freedom with .05 level of significance.
- Condom torture cases increase as the income of the respondents increase from birr 60 to birr 1025. But it becomes least at an average income level of above birr 1200. The degree of association between theses two variables is 46.3 percent at .038 approximate level of significance

Educational Level versus Behavioral Variables

- It is found that educational level has no any association with drug addiction. Similarly, the majority respondents who are experiencing multiple sexes are at the high school level are experiencing unsafe sex as well as condom torture cases. Premarital sex is also at a peak at amongst the respondents at the high school level.
- Idleness is a major factor for multiple sex for those at lower educational level (8th grade and below) higher educational level (9th grade and above).
- Most of the population that is disposed to the infection by the HIV is the youth population at the educational level of 9-12th grades. Bout 33 percent of the population

are poor in openness and interest to exchange HIV information and about 14 percent of them are very poor. The poorest group of the population in openness and interest to exchange HIV information are those at the lowest educational level, from 1-6th grades and then population at the high school level. The chi square analysis indicated there no difference in counseling cases across the categories of educational levels.

- The horizontal, educational comparison of the respondents has indicated that the majority of the respondents in the lowest educational level from 0-8th grades, exchange HIV information with nobody; those in high school level and above exchange HIV information with their families. The computed strength of association between these variables is 53.9 percent Contingency Coefficient at .05 an approximate level of significance.

DRUG ADDICTION VERSUS EDUCATIONAL LEVEL

- Usually most people may assume that education, by creating awareness on the individuals about the negative effect of drugs reduces the drug addiction of the individuals. But here it is found that all educated as well as non-educated regardless of the level of education are equally addicted to drugs.
- Though the majority of the populations who are experiencing multiple sexes are those at the high school level due to age factor, the level of education by itself has no effect on the multiple sexual behaviors of the respondents. All groups in different educational level experienced multiple sex equally.

Housing versus Behavioral Variables

- The chi square analysis indicated that there is no difference in multiple sexual behaviors of the respondents regardless of whether they live in rented, personal or governmental house across. The test was made at the significance level of .05 with degrees of freedom 12.
- Housing is not associated with drug addiction and leading factor for unsafe sex as well as the selection of partners. Regardless of the housing issue whether it is personal, governmental, rented or the other, the selection of the types of the partners also remains the same as indicated by the chi square analysis at significance level of .612 at a degrees of freedom 12.

- 65 percent of the respondents, a great number who reside in personal house and the same percentage of respondents residing in governmental house have experienced unsafe sex many times or never use condom at all, 48.7 percent Coefficient of Contingency at an approximate significance level of .05.

4.4. SOCIO-CULTURAL VERSUS BEHAVIORAL VARIABLES

Nurturing Versus Behavioral Variables

- The major reason for poor nurturing as reported by the respondents is poverty followed by lack of free communication. 54.5 percent of chat usage and its addiction results from poor nurturing. On the other hand, smoking is not caused by poor nurturing. It is also found that there is no significant association between multiple sexual behaviors of the respondents and effectiveness of nurturing.
- The major cause that pushes those respondents who are nurtured poorly towards sex is economic advantage or disappointment with their families whereas the primary factor that pushes those nurtured in a good way towards multiples sex is sexual satisfaction. This is evidenced by a chi square test as well as its test of association, 52.25 percent at .05 level of significance and 18 degrees of freedom. There is no association between nurturing and the type of partners that are selected for multiple sexes at a significance level of .05 and degrees of freedom 18.
- It was suspected that poor nurturing may result in some other factors leading to unsafe sex. However, the chi square test of association has indicated that there is no association between unsafe sex and factors that lead to unsafe sex such as depression at a significance even at a significance level of .328 at 18 degrees of freedom.

Rape versus Behavioral Variables

- There is very weak association between chat usage and rape. This may be because of a very few cases of raped respondents in a sample. This implies that rape is not the major cause of HIV infection in Addis Ababa and Nazareth. In addition it indicates that there is no association between rape and chat usage. The degree of association between these two variables is only 18.3 percent.

- In real terms, nurturing has many social impacts on the individual. The overall personality of an individual is a result of nurture as well as nature. The chi square test has indicated that nurturing has no any association with the condom usage of individuals as tested at a significance level of .05 with degrees of freedom 9. Similarly, there is no association between condom torture cases and rape as tested by the chi square test at .05 level of significance with 12 degrees of freedom
- Rape cases as reported by the respondents is very few, only seven percent of the total samples. But the chi square analysis has shown that there is association between condom usage and rape, 45.8 percent by using Contingency Coefficient.
- According to Mitku W/ Mariam: 1999, different harmful cultural practices such as tattooing, male circumcision, female genital matriculation (FGM) ear piercing, vasectomy, etc are major socio-cultural factors promoting the spread of HIV in Ethiopia. A further risk factor for young women is that studies have shown that in some societies, initiation into sex often involves coercion, increasing the risk of trauma during intercourse and the potential for HIV transmission ("<http://en.wikipedia.org/wiki>"). But the current analysis has indicated that the socio cultural factors such as nurturing, tattooing milk teeth extraction, ear piercing, vasectomy and FGM are not significantly associated with the HIV susceptible behaviors or to the HIV infection of the individuals such as drug addiction, multi-sexual behavior and condom usage.

CHAPTER – V

SUMMARY, CONCLUSIONS AND PRACTICAL IMPLICATIONS OF THE FINDINGS

5.1. SUMMARY OF THE FINDING.

HIV /AIDS is currently a global epidemic which is specially an obstacle for development in African developing countries such as Ethiopia. It is an epidemic at a drastic rate of spread. Different authors particularly in medical magazines and journals state that the major factor for the spread of HIV/AIDS is usage sex with more than one partner.

As a result, current media advertising emphasizes on creation of awareness on the general public about usage of condoms. In addition, current media advertising related to HIV /AIDS focuses on changing the attitude of the general public towards condom usage. Regardless of the current creation of awareness, the public is already aware off all about the disease. But, the epidemic is still expanding its territories in an increasing rate in some areas and in the same rate in other areas.

As indicted in the literature review different factors are supposed by different researchers for the spread of HIV/AIDS such as cultural factors, age, gender inequality education, sexual information, sexual behavior, economic status, etc. But, the major factor that is particular to a specific region or country is not stated yet in these researches. As a result, this research is intended to find out the major factors responsible for expansion of the epidemic particularly in Nazareth and Addis Ababa. Specifically, the study was guided by the following research objectives.

1. To explore the demographic factors those are associated with HIV susceptible Behaviors such as marital status versus Interest and Openness to exchange HIV information, marital status versus drug addiction, marital status versus multiple sex, marital status versus the factor that pushes to multiple sex, marital status versus condom usage, marital status versus premarital sex, marital status versus condom torture during sex, sex versus

interest and openness to exchange HIV information, drug addiction, multiple sex, the factor that pushes to multiple sex, type of partners, condom usage, premarital sex, age versus multiple sex, age versus drug addiction, age versus condom usage, age versus condom torture and place of birth versus other HIV susceptible behavioral characteristics.

2. To explore the effect of behavioral characteristics of individuals such as drug addiction, Openness and interest to communicate about condoms, stress coping mechanisms and the factors that push to multiple and unsafe sex on HIV susceptible actions and behaviors such as multiple sex, condom usage, condom torture, premarital sex.
3. To explore the relation of Socio-economic factors versus Behavioral variables associated with HIV such as HIV susceptible behaviors versus education, occupation, average income, and housing.
4. To explore the relation of Socio-cultural factors versus Behavioral variables associated with HIV such as HIV susceptible behaviors versus rape, freedom of communication about HIV and condoms, tattooing, milk teeth extraction and blood donation and nurturing.

The data collected from 100 HIV patients in hospitals and Dawn Hope of Ethiopia in Nazareth is analyzed by using cross tabulations and frequency tables to observe the association of one variable on the behaviors of individuals that are susceptible for HIV infection. To decide on the existence of association between pair of variables a chi square test of independence and coefficient of contingency were used to test strength of association between the two variables. Variables that are associated with some behaviors such as multiple sexes during addition and others are explained in cross tabular forms and bar charts. Those variables that are not assaulted are not presented in a form of tables and bar charts. Based on the strength of association between a pair of variables as obtained from the analysis, the following major findings have been deducted obtained.

5.1.1. Demographic versus HIV Susceptive Behaviors

- Married people are poorer in interest and openness to exchange about HIV and with higher condom use cases than others, 34.1 percent Coefficient of Contingency. But multiple sex cases and premarital sex are dominant amongst the unmarried people.
- In case of Addis Ababa and Nazareth, Access to HIV information, Counseling and the party with whom one exchanges HIV information are the same along both males and females.
- Males are more drug addicted and promiscuous than females, 41.4 percent of association. Similarly, 68.2 percent of males had experienced unsafe sex, 42.3 percent of association. The major factor that pushes 47.7 percent of males towards multiple sexes is sexual satisfaction, but females are more pushed by economic advantage. The dominant sexual partners for about 90 percent of males are commercial sex workers while those of females are incidental persons and neighborhoods, 51.5 percent degree of association. But, the unsafe and safe multi sexual cases are the same across male as well as female groups.
- Many of the behavioral characteristics of the respondents, except multiple sex behavior are not associated with age. The multi sexual behavior is dominant at an average age group 34 years (29-39 years). In general, the multi sexual behavior is dominant in the adult of the population. HIV spread is also dominant in the age group of 29-39 years. This age group is also dominantly experiencing unsafe sex. The age versus the factor that pushes to multiple sexes has indicated that the majority of the respondents in the average age group of 34 years are pushed to multiple sexes as a result of the need for sexual satisfaction while the dominant numbers of those at an average age group of 23 years are pushed by excessive drug intake.
- People in Addis Ababa are more open to discuss about HIV matters and have better need for counseling than people in Nazareth, 38 percent association. But, birth place and place of residence have no significance association with most of the HIV susceptible behavior. Regardless of the usual family members one is up brought, the rest of the behavioral characteristics of the individual remain the same across all categories respondents with different usual family members.

5.1.2. Behavioral Versus Behavioral Variables

- The great majority of the respondents have experienced unsafe sex with multiple partners as well as premarital sex and condom torture cases that unsafe multiple sex and condom torture are the major factors responsible for the spread of HIV. Regardless of the electronic test of condom reliability, the practical experience search of condom reliability indicates that it is below 78 percent. Condom torture is more for those whose sexual partners are incidental persons followed by sexual workers. It is strongly associated with the number of multiple sexual cases of an individual. Condom torture is not associated with smoking but, it is significantly associated with chat and alcoholism 50.7 percent 52.6 percent respectively. There is a moderate, 47.4 percent strength of association between alcoholism and unsafe sex.
- The factor that pushes toward multiple sexes for the majority of respondent is the need for sexual satisfaction followed by economic advantage, excessive drug and disappointment. It is found that there is a significant association 48 percent of association between alcoholism and multiple sexes and multiple sexes versus smoking, 67.4 percent. But there is no association between chat usage and multiple sexes.
- Free exchange of information about condoms and HIV related information in general reduces premarital sex and unsafe sexual behavior of the individuals, 45 percent of association. Interest and openness to exchange HIV information and free exchange of HIV related information have a high strength of association (61.3 percent 56 percent respectively) with premarital sex.

5.1.3. Economic variables versus Behavioral Variables

- Alcoholism, chat addiction and smoking are associated with occupation with strength of 43.2, 44.6 and 31.7 percents respectively. Taxi drivers and businessmen are more drugs addicted than other occupational groups.
- Respondents with the lowest income level tend to communicate HIV information with nobody and are pushed to unsafe sex due to idleness while those with the highest average income level communicate HIV information with the medical professionals and are pushed to unsafe sex because of their need for love and sexual satisfaction, '54.1

percent strength of association. Condom use cases increase as the income of the respondents increase from birr 60 to birr 1025. But it becomes least at an average income level of above birr 1200. The degree of association between these two variables is 46.3 percent at .05 approximate level of significance

- The majority respondents who are experiencing unsafe multiple sexes and condom use are at the high school level. Love and excessive drug use are reported as the major cause of unsafe sex for those at high school level and Diploma level whereas idleness for those at lowest educational level and junior high school level, 54.8 percent of association. Most of the population that is disposed to the infection by the HIV is the youth population at the educational level of 9-12th grades. Premarital sex is also dominant amongst this category, 48 percent of degree of association. All educated as well as non-educated regardless of the level of education are equally addicted to drugs.
- 65 percent of the respondents a great number who reside in personal house and the same percentage of respondents residing in governmental house have experienced unsafe sex many times or never use condom at all, 48.7 percent Coefficient of Contingency. Except unsafe sex behavior, the rest of the behavioral variables are the same regardless of whether the respondents live in rented, personal or governmental house across.

5.1.4. Analysis of Socio-Cultural versus Behavioral Variables

- The major cause that pushes those respondents who are nurtured poorly towards sex is economic advantage or disappointment with their families whereas the primary factor that pushes those nurtured in a good way towards multiple sex is sexual satisfaction. Though the reported rape cases are very few, only seven percent of the total samples, most existing rapes were experienced without condoms, 45.8 percent by using Contingency Coefficient.
- The socio cultural factors such as nurturing, tattooing milk teeth extraction, ear piercing, vasectomy and FGM are not significantly associated with the HIV susceptible behaviors or to the HIV infection of the individuals such as drug addiction, multi-sexual behavior and condom usage.

5.2. CONCLUSIONS

- ☑ Generally, unmarried people are most behaving to HIV susceptible behaviors such as multiple sex, drug addiction, and premarital sex. But married people are facing more condom torture cases and less interest and openness to discuss HIV matters than other groups of marital statuses
- ☑ Males are much more behaving in HIV susceptible manner like drug addiction, multiple sex with commercial sex workers, for sexual satisfaction unlike females who are pushed to sex for economic advantage
- ☑ Age versus behavioral factors analysis indicated that people at an average age group of 29-39 years are most promiscuous while those at lower age groups are making sex for economic advantage and excessive drugs.
- ☑ Alcoholism, smoking and interest and openness to discuss about HIV and condoms are moderately associated with premarital sex, multiple sex behaviors and condom torture.
- ☑ Chat and alcoholism have a moderate association with condom torture whereas only alcoholism has moderate association with unsafe sex.
- ☑ People with low income are moderately facing problem of communication about the epidemic where as those with higher income and good occupation are facing drug addiction problems and problems of sexual satisfaction. Besides, those with middle income level are facing most condom torture cases than other groups of income categories.
- ☑ HIV prevalence is the highest in grades 9-12th population because premarital sex, multiple sexes and unsafe sex are at peak in this group. The low educational level groups are also facing problems of communication about the epidemic.
- ☑ Nurturing has no a direct and significant effect on HIV susceptible behaviors. But, it has a moderate effect on the need for multiple sex for economic advantage.

5.3. RECOMMENDATIONS FOR THE FINDINGS

Based on the major findings of the study, the following important implications or recommendations have been deducted.

5.3.1. Demographic Factors Associated with the HIV Susceptive Behaviors

- Family sex education is needed to married people to promote their interest and openness to exchange about HIV information and condoms. In addition, marriage counselling should be diversified to identify the major problems of married and unmarried people and the cause of their premarital and post marital multiple sex behaviors.
- The city governments of Addis Ababa and Nazareth all other concerned bodies should try to reduce the economic disparity of the individuals in the towns so as to reduce the premarital and multiple sex cases pushed by economic advantage.
- The reason for relatively high cases of condom torture among married people in particular and among the population in general should be again searched and the media advertising should be conducted accordingly.
- Multiple sexual behavior, unsafe sex and premarital sex are more among males than females. Thus, more education must be given to males to change their HIV susceptible behaviors such as their sexual meeting with commercial sex workers. Similarly, emphasis has to be given to girls in respect to creating self independence and a sense of self awareness to reduce their economic dependency. Self assertiveness training of females to make them self dependent and training them in entrepreneurial activities as well as engaging them in different economic activities that may reduces their economic shortage to reduce multiple sex and then the spread of HIV. Thus, females need assertive training to reduce sex with incidental persons whereas males require sexual training to reduce sex with the commercial sex workers.
- Sex education is required to all age groups of the respondents to reduce their premarital sex cases, drug addictive behaviors and to reduce other HIV susceptible behaviors. But a great emphasis has to be given to individuals at the age group of 18 - 39 years. To reduce

unsafe multi-sexual behavior of the youth group, media advertising peer group education in schools and industrial setting should be continued in creation of awareness.

- The multi sexual behavior, premarital sex and unsafe sexual behaviors are dominant amongst the respondents in the age group of (29-39 years). It is also relatively dominant in the average age groups of 23 years (18-28) and in average age groups of 45 years (40-50 years). In general, the multi sexual behavior is dominant in the adult of the population. HIV spread is also dominant in the age group of 29-39 years. As a result a continuous march should be made to change the sexual behavioral characteristics of this group.

Birth Place versus Behavioral Variables

- People in Addis Ababa are more open to discuss about HIV matters and have better need for counseling than people in Nazareth. The people of Nazareth have to be taught on free communication about condoms and related HIV information.

5.3.2. Behavioral versus Behavioral Variables

- Effort has to be exerted by the government, NGOs, and other organizations to change unsafe multiple sexual behaviors of the respondents and to find solutions to high condom torture cases and its resulting less practical reliability.
- To reduce the high association of drug addiction with the multiple sexual behaviors of the individuals and their resulting unsafe sex, people have to be educated and continuously informed about the effect of drugs on HIV infection. Moreover other alternative recreational mechanisms have to be established to reduce the drug addiction caused by lack of recreational centers.
- Family have to also be educated on how to care and nurture the youth to reduce the probable HIV infection. Education has to get emphasis than information unlike the current Ethiopian HIV prevention policy. To do so, peer group educators have to be recruited and increased in quantity like the Ugandan case.

- Free exchange of information about condoms and HIV related information in general should be continued to be advertised by the public media to reduce premarital sex and unsafe sexual behavior of the individuals.
- Drugs like chat and alcohols need to be controlled by the government to control its effect on HIV as well as on other respects. The nature of condom and its usage has to be taught for all groups of persons to reduce condom torture.
- Since the condom torture cases are high regardless of behavioral, economic or demographic categories, the media advertising that over emphasizes condom as 98 percent reliable tools should change the way of advertising. Thus, the media and the advertising about condoms should tell that condom usage is only 78 percent reliable because of torture and other different practical reasons regardless of electronic laboratory tests.

Formal programs of sex education and HIV-related education are most successful when they include messages about safer sex as well as abstinence. Convincing messages which inform parents as well as policy-makers that timely and relevant sex education reduce propelling young people into premature sexual relationships must be disseminated.

- Teachers also require training in delivering sex education and developing confidence in talking to young people about sex. Supportive environments, including support from policy makers, educationalists and head teachers, are important in helping teachers to deliver effective programs of HIV-related education. There is evidence to suggest that peer education programs support young people in making changes to their behavior.

More work with young men is required to enable them to think about their role in relation to both their own sexual health and that of their partners, as well as improving programs for young women.

- Improved access to non-judgmental and user-friendly sexual health services is crucial for young people. Young people need improved access to good quality condoms; it is important that confidential and non-judgmental provision is improved for young people.

5.3.3. Economic Variables versus Behavioral Variables

- Peer group education and specific postcard displays have to be made to indicate the effect of drug addiction to the HIV infection particularly to taxi drivers and businessmen who are more drugs addicted than other occupational groups.
- All the concerned parties have to exert effort to diversify the general counseling service to those individual with low as well as high income level so as to promote free exchange of information about HIV and condom usage and to change the HIV susceptible behaviors of the individuals. Moreover, income disparity should be minimized as much as possible to lower down the economic impact on multiples sexual behavior.
- Condom use cases increase as the income of the respondents increase from birr 60 to birr 1025. But it becomes least at an average income level of above birr 1200. But the reason for such relation is not found out in this research paper.
- Schools in the high school level must establish peer group education and Anti HIV committee to teach the youth about HIV. Moreover, to reduce the high HIV prevalence of the HIV at the high school level, curriculum has to be designed to shape the behaviors of the students towards premarital multiple sex and its effects.
- School leavers from the high school level have to be motivated to develop a sense of independence and to make them the working group and to idleness which is a major factor for multiple sex for those at lower educational level (8th grade and below) higher educational level (9th grade and above). Moreover, they need to be educated and counseled about HIV, the effect of drugs and the nature of HIV/AIDS in general.
- Since the majorities of high school students never use condoms or only sometimes use it due to excessive love and drug, they need to be educated and informed continuously to shape their sexual behaviors so as to reduce premarital and their multiples sexual behaviors.
- Sex education is required for all groups housing to reduce their sexual act with the commercial sex workers. As human sex is not a reflex action like other animals, attitudinal changes have to be brought on the respondents especially on those who reside in personal house and governmental houses.
- In Addis Ababa and Nazareth, the effect of socio-cultural factors on spread of HIV is very low that other factors that cause HIV infection such as unsafe sex have to be prioritized.

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The objective of this questionnaire is to find the major factors responsible for the distribution of HIV/AIDS so as to recommend the major solution to combat if not to reduce the distribution of the epidemic. As a result your contribution to answer this questionnaire has a vital role towards the success of the objective. Thus, may you answer the questions and the scales below by encircling or placing a check mark?

THANK YOU IN ADVANCE

PART I. Personal Information

1. Marital status?
A. Married B. Unmarried C. Divorced Widowed
2. Sex: A. Male B. Female
3. Age: A. 7-7 Years B. 18-28 Years C. 29-38 Years
 D. 39-50 Years E. above 50 Years
4. Educational level:
A. Below Grade 6 B. Grade 6 – 8 C. Grade 9 – 12
D. Diploma level E. Degree level F. above Degree level
5. Place of birth:
Region _____ Zone _____ Woreda _____ Town _____
6. The current place of residence:
Region _____ Zone _____ Woreda _____ Town _____
7. With whom you live in your home?
A. with my father and mother B. with my intimate friends
C. with my wife or husband D. Alone
8. the current family members in your house
A. Nobody except my self
B. Me and my wife or husband
C. Me, my wife or husband and a child
D. Me, my wife or husband and two or more children
9. Where do you live in?
A. Rented house B. my own house
C. governmental house D. I have no any house I live in the street

10. What is your occupation?
 - A. Personal business
 - B. Government employee
 - C. Taxi driver
 - D. Daily Laborer
 - E. Any other(Please Specify)_____
11. Can you satisfy your basic needs by your current occupation?
 - A. Yes, I can fully satisfy
 - B. Yes, but partially
 - C. I can't satisfy my basic need except food
 - D. No any type of basic need is satisfied
12. Your average monthly income

A. Birr 0-120	B. Birr 121- 450	C. Birr 451-850
D. Birr 850-1200	E. 1201- and above	

PART II. General Information

13. Have you ever been tested HIV/AIDS?
 - A) Yes I am HIV negative
 - B) Yes I m HIV Positive
 - C) No
14. If you are HIV positive, what do you think is the major cause for your infection by HIV?
 - A. Unsafe sex without the use of condoms
 - B. Sharing of sharpened materials with the infected persons
 - C. Condom torture during sex
 - D. Contamination due to improper usage of condoms
 - E. Others Please specify_____
15. How was your nurturing in your family?

A. Very good	B. Good	C. Poor	D. Neglected
--------------	---------	---------	--------------
16. If your development in your family was Poor or neglected, what do you think was the cause?
 - A. because of poverty
 - B. Because of strict control by parents.
 - C. no free communication among
 - D. I don't know the cause
17. Have you ever seen people discriminating HIV victims?
 - A. Yes
 - B. No
18. If you have seen or encountered people discriminating HIV victims, what was your feeling towards those people discriminating HIV victims?
 - A. I feel like insulting them
 - B. I feel like to revenge them by infecting them by HIV
 - C. I felt nothing
 - D. Others_____
19. How is openness and interest to exchange Information about HIV with your family and your friends?

A. Very poor	B. Poor	C. good	D. Very good
--------------	---------	---------	--------------

20. How is your Communication access about HIV?
 A. Very poor B. Poor C. good D. Very good
21. After you have been infected by HIV, have you ever met HIV counselors?
 A. Yes B. No
22. With whom do you freely communicate about HIV?
 A. with my family members
 B. With my friends
 C. With all the persons
 D. I do not feel free to communicate about it with any person
23. If you do not feel free to communicate about HIV with any person, why? _____
24. When you encountered serious problem and when you were in stress, how you did solve it?
 A. by discussing with my friends
 B. by discussing with my family
 C. by discussing with the counsellor
 D. by enjoying through drug intakes in hotels and restaurants
 E. Others (please specify) _____
25. Do you drink alcohol?
 A. Yes B. No but some times I drink C. Never
26. Have you ever made sex after alcohol intake?
 A. Never B. Some times C I almost make sex whenever I take alcohol.
27. Have you ever chewed chat?
 A. Daily B. Some times C. Never
28. Have you ever made sex after chewing chat?
 A. Never B. Some times C. I almost make sex whenever I chew chat
29. Are you smoker? A. Yes B. No
31. Do you ever have had multiple partners?
 A) Never B) only Once C) only Twice D. Many times
32. If you were experiencing sex with multiple partners, what pushed you towards sex with multiple partners?
 A. Because of sexual dissatisfaction with my partner
 B. Because of strong proximity and love with others
 C. to gain economic advantage from the partners
 D. Because of unwanted incidental decision due to some addictions
 E. Disagreement with my family or disappointment in life
 F. Others (please Specify) _____
33. With whom you usually experience sex?
 A. with students
 B. With my occupational staff members
 C. With my neighbors
 D. With the commercial sex workers
 E. Others please specify _____

34. When you usually decide to make unwanted sex?
 A. When I am Depressed
 B. when I take Excessive drug
 C. when I am idle
 D. when I see enjoyable person
 E. I don't know
 F. others _____
35. What type of sex you usually experience? (More than one answer) is possible)
 A. Vaginal
 B. Oral
 C. Anal
 D. homosexuals
36. If you were experiencing sex with multiple partners, do you use condoms during sex?
 A. always
 B. Some times
 C. Never
37. Can you freely communicate about condoms and its usage with any person?
 A. Yes
 B. Partially
 C. Never

PART III.

To answer the following information in the table, place a check mark or (x) for an alternative that concerns you.

Items	Never	Once	Twice	Many Times
38. Have you ever received blood from others?				
39. Have you ever been extracted your teeth				
40. Have you ever been tattooed?				
41. Have you ever been pierced your ear?				
42. Have you ever made sex before marriage?				
43. Have you ever made unsafe sex without condoms?				
44. Have you ever faced condom torture during your sex?				
45. Do you always use condom during sex?				
46. Do you use other chemicals such as lubricants				
47. Have you ever been raped				

The following are statements about beliefs about HIV. Place a check mark on the scale which you agree upon. No right answer except your opinion.

	A	B	C	D	E
48. Not enough money is being spent on AIDS – related research ✓					
49. People need education to learn how to avoid getting the virus AIDS.					
50. AIDS education is an appropriate task for schools to perform.					
51. Sexual education about AIDS is necessary at school.					
52. AIDS infected children should be kept out of public school.					
53. AIDS is a serious national problem that deserves government attention.					
54. It is important that students learn about AIDS in their classes.					
55. The Federal Government ought to fund education on AIDS.					
56. Children need instruction about AIDS in their school curriculum					

A= agree B= slightly agree C= neither agree nor disagree D= slightly disagree E= disagree

አዲስ አበባ ዩኒቨርሲቲ
የድህረ ምረቃ ትምህርት ቤት
ትምህርት ሳይኮሎጂ ክፍል

የዚህ መጠይቅ ዋና ዓላማ ለኤች አይ ቪ ቫይረስ መዛመት ዋና መንስዔ የሆኑትን ምክንያቶችን ለመፈለግና ለችግሩም መፍትሔ ለመጠቀም ነው። ስለሆነም እርስዎ መጠይቁን በትክክል ለመመላት የሚያደርጉት ትብብር ለጥናቱ መሣካት ከፍተኛ አስተዋጽኦ አለው።

ለሚያደርጉት ትብብር በቅድሚያ እናመሰግናለን።

ክፍል አንድ

1. የጋብቻ ሁኔታ፤
 ሀ. ያገባ ለ. ያላገባ ሐ. በፍች የተለያየ መ በሞት የተለያየ
2. ያታ፤ ሀ. ወንድ ለ. ሴት
3. ዐድሜ፤
 ሀ. 7 እስከ 17 ዓመት ለ. 18 እስከ 28 ዓመት ሐ. 29 እስከ 39 ዓመት
 መ. 40 እስከ 50 ዓመት ሠ. ከ50 ዓመት በላይ
4. የትምህርት ደረጃ
 ሀ. ከ6ኛ ክፍል በታች ለ. ከ7ኛ እስከ 8ኛ ክፍል ሐ. ከ9ኛ እስከ 12ኛ ክፍል
 መ. ዲፕሎማ ሠ. ዲግሪ ረ. ከዲግሪ በላይ
5. የትውልድዎ ቦታ፤
 ክልል..... ዞን..... ወረዳ..... ከተማ.....
6. አሁን የሚኖሩበት ቦታ፤
 ክልል..... ዞን..... ወረዳ..... ከተማ.....
7. ብዙውን ጊዜ ቤትዎ የሚኖሩት ከማን ጋር ነበር
 ሀ. ከወላጅ ቤተሰብ ጋር ለ. ከተመሳሳይ ያታ ጓደኞች ጋር
 ሐ. ከትዳር ጓደኛ ጋር መ. ብቻየን
 ሠ. ከትዳር ጓደኛየ ጋር
8. አሁን እርስዎ ጋር በቤትዎ ውስጥ የሚኖሩት የቤተሰብ አባላት
 ሀ. ከራሴ በስተቅር በቤቴ ማንም ሌላ ሰው የለም
 ለ. እኔና ባለቤቴ ብቻ
 ሐ. እኔ ባለቤቴ አንድ ልጃችን ብቻ
 መ. እኔ ባለቤቴና ሁለት ወይም ከዚያ በላይ ልጆቻችን ብቻ
 ሠ. ወላጅ ቤተሰቦቼና ሌሎችም
9. አሁን የሚኖሩበት ቤት
 ሀ. የኪራይ ነው ለ. የራስዎ ቤት ነው ሐ. የመንግስት ቤት ነው
 መ. የአደራ ቤት ነው ሠ. ምንም ቤት የለኝም በረንዳ አዳሪ ነኝ
 ረ. ሌላ-----
10. የመተዳደሪያ ሥራ፤
 ሀ. ነጋዴ ለ. የመንግስት ሠራተኛ
 ሐ. የታክሲ ሽፌር መ. የቀን ሠራተኛ
 ሠ. ሌላ.....
11. አሁን በተሠማሩበት የመተዳደሪያ ሥራ መሠረታዊ ፍላጎታቸውን ማሟላት ይችላሉ
 ሀ. አዎን በደንብ ማሟላት እችላለሁ
 ለ. አዎን በመጠኑ ማሟላት እችላለሁ
 ሐ. ምግብ ብቻ እንጅ ሌላው መሰሉ በመሰሉ አይሟላም
 መ. ምንም የተሟላ መሠረታዊ ነገር የለም

12. የወር ገቢዎ ከሚከተሉት በየትኛው ውስጥ ይካተታል?
 ሀ. ከብር 0 እስከ 120 ለ. ከብር 121 እስከ 450
 ሐ. ከብር 451 እስከ 850 መ. ከብር 851 እስከ 1200 ሠ. ከብር 1200 በላይ

ክፍል ሁለት

13. የኤች አይ ቪ ቫይረስ በደምዎ መኖር አለመኖሩን ለማረጋገጥ የደም ምርመራ አድርገው ያውቃሉ?
 ሀ. አዎን በውጤቱም ከቫይረሱ ነፃ ነኝ
 ለ. አዎን በውጤቱም ኤች አይ ቪ ፖዘቲብ ነኝ
 ሐ. ተመርምራ አላውቅም
14. የደምዎ የኤች አይ ቪ ቫይረስ የምርመራ ውጤት ፖዘቲቭ ከሆነ ለቫይረሱ መተላለፍ ዋና መንስዔ ሆኖብኛል ብለው የሚያምኑት ምንድነው?
 ሀ. ጥንቃቄ የጉደለው የግብረሥጋ ግንኙነት
 ለ. ስለታማ ነገሮችን ከሌሎች ሰዎች ጋር መጋራት
 ሐ. በግብረሥጋ ግንኙነት ወቅት የኮንዶም መበጠስ
 መ. ኮንዶምን በአግባቡ መጠቀም ባለመቻል ምክንያት በሚመጣ ንክኪ
 ሠ. ሌላ -----
15. ከወላጆችዎ ጋር እያሉ የነበረዎት ፍቅር መተላለፍና አጠቃላይ አስተዳደግ እንዴት ነበር?
 ሀ. በጣም ጥሩ ለ. ጥሩ ሐ. ዝቅተኛ
 መ. ምንም ዓይነት ፍቅርም መተላለፍና መግባባት ወይም ስምምነት የሌለበት ነበር
16. በዕድገትዎ ሂደት ውስጥ በእርስዎና በቤተሰብዎ መካከል ፍቅር መተላለፍና መግባባት ያልነበረበት ከሆነ ምክንያቱ ምን ይመስልዎታል?
 ሀ. የኢኮኖሚ ማነስ ለ. የወላጆቹ ከመጠን ያለፈ ቁጥጥር
 ሐ. ነገሮችን በግልጽ መነጋገር አለመቻል መ. ምክንያቱን አላውቅም
17. አድልዎ ወይም መድልዎ አጋጥሞዎት ያውቃል?
 ሀ. አዎን ለ. አላጋጠመኝም
18. አድልዎ ወይም መድልዎ አጋጥሞዎት ከሆነ በወቅቱ ምን ስሜት ተሰምቶዎት ነበር?
 ሀ. በመስደብ አፀፋውን መመለስ
 ለ. ቤች አይ ቪ ቫይረስ በመበከል አፀፋውን መመለስ
 ሐ. ምንም ስሜት አልተሰማኝም
 መ. ሌላ -----
19. ኤች አይ ቪ ኤድስን በተመለከተ ከጓደኛ ከወላጅና ከባለሙያዎች ጋር መረጃ ለመለዋወጥ የነበረዎት ፍላጎትና ግልጽነት
 ሀ. በጣም አነስተኛ ለ. አነስተኛ ሐ. ከፍተኛ መ. በጣም ከፍተኛ
20. ኤች አይ ቪ ኤድስን በተመለከተ ከጓደኛ ከወላጅ ከባለሙያዎች ወዘተ የሚያገኙት መረጃ
 ሀ. በጣም አነስተኛ ለ. አነስተኛ ሐ. ከፍተኛ መ. በጣም ከፍተኛ
21. በኤች አይ ቪ ኤድስ ከተያዙ በኋላ የኤች አይ ቪ ኤድስ አማካሪዎችን/ካውንስለሮችን አማክረው ያውቃሉ?
 ሀ. አዎን ለ. አማካሪ አላውቅም
22. ስለኤች አይ ቪ ቫይረስ በነፃነት መነጋገር የሚችሉት ከማን ጋር ነው?
 ሀ. በቤተሰብዎ አባላት ጋር ለ. ከጓደኛዎች ጋር
 ሐ. ከሁሉም ሰው ጋር መ. ከማንም ሰው ጋር ለመነጋገር ነፃነት አይሰማኝም
23. ስለ ኤች አይ ቪ ቫይረስ ከማንም ሰው ጋር መነጋገር የማይፈልጉ ከሆነ ምክንያቱ ምንድነው?

24. ከባድ ችግር በገጠመዎት ጊዜ ወይም ከፍተኛ የመንፈስ ጭንቀት ባጋጠመዎት ወቅት ለችግሩ መፍትሔ የሚፈልጉት በምን መልኩ ነው?

ሀ. ከጓደኞቼ ጋር በመነጋገር

ለ. ከቤተሰቦቼ ጋር በመነጋገር

ሐ. ከባለሙያዎች ጋር በመነጋገር

መ. በከፍተኛ መጠጥ ወይም ሌላ አደንዛዘዥ ዕዕ በመጠቀም

ሠ. ሌላ-----

25. የአልኮል መጠጦችን ይጠጣሉ?

ሀ. አዎን

ለ. አልፎ ሐልፎ በመጠኑ እጠጣለሁ

ሐ. በፍጹም

26. አልኮል ከጠጡ በኋላ የግብረሥጋ ግንኙነት ፈጽመው ያዉቃሉ?

ሀ. በፍጹም

ለ. አልፎ አልፎ

ሐ. አልኮል በጠጣሁ ቁጥር የግብረሥጋ ግንኙነት እፈጽማለሁ

27. ጫት ይክማሉ?

ሀ. በየቀኑ

ለ. አልፎ አልፎ

ሐ. በፍጹም

28. ጫት ከካሙ በኋላ የግብረሥጋ ግንኙነት ፈጽመው ያውቃሉ?

ሀ. በፍጹም

ለ. አልፎ አልፎ

ሐ. ብዙ ጫት በካምኩ ቁጥር የግብረሥጋ ግንኙነት እፈጽማለሁ

29. የሲጋራ ሱስ አለብዎት?

ሀ. አዎን

ለ. የለብኝም

30. ከዚህ በፊት የሚያደርጉት የግብረሥጋ ግንኙነት

ሀ. በአንድ የትዳር ጓደኛ የተወሰነ ነው።

ለ. በሁለት ፍቅር ጓደኛ የተወሰነ ነው።

ሐ. ከሁለት በላይ የፍቅር ጓደኛ ጋር ነው።

31. ከአንድ በላይ የተቃራኒ የታ የፍቅር ጓደኛ ጋር የግብረሥጋ ግንኙነት አድርገው ያውቃሉ?

ሀ. በፍጹም

ለ. አንድ ጊዜ ብቻ

ሐ. ሁለት ጊዜ ብቻ

መ. ከሁለት ጊዜ በላይ

32. ከአንድ በላይ የተቃራኒ የታ የፍቅር ጓደኛ ይዘው ያሚውቁ ከሆነ ብዙ የፍቅር

ጓደኛ እንዲይዙ የገፋፋዎት ምክንያት

ሀ. የወሲብ ፍላጎት ለማርካት ብቻ

ለ. ከተቃራኒ የታ ጋር የነበረው ጠንካራ ፍቅር

ሐ. ከተቃራኒ የታ የገንዘብ ወይም ሌላ የኢኮኖሚ ጥቅም ለማግኘት

መ. ለመጠጥ ወይም ለሌላ ነገር ሱስኛ መሆን

ሠ. የቤተሰብ ግጭት ወይም በነገሩ ደስተኛ አለመሆን

ረ. ሌላ -----

33. ከትዳር ጓደኛዎ ውጪ የግብረሥጋ ግንኙነት የሚያደርጉ ከሆነ ብዙውን ጊዜ

የግብረሥጋ ግንኙነት የሚያደርጉት ከማን ጋር ነው?

ሀ. ከተማሪዎች ጋር

መ. ከሱስኛ አዳሪዎች ጋር

ለ. ከሥራ ባልደረቦቹ ጋር

ሠ.

ሌላ-----

ሐ. ከጎረቤቶቹ ጋር

34. አብዛኛውን ጊዜ ወዳልተፈለገው የግብረሥጋ ግንኙነት እንዲያመሩ የሚያደርግዎት ምንድነው?

ሀ. መዝናኛ ማጣጥ/ ድብርት

ለ. ከመጠን በላይ የሆነ የአልኮል መጠጥ

ሐ. ሥራ አጥነት

መ. ከተቃራኒ የታ ጋር የሚከሰት ከፍተኛ ፍቅር

ሠ. አላውቅም

ረ. ሌላ -----

35. የሚያዘውትሩት የግብረሥጋ ግንኙነት ዓይነት

ሀ. ከተቃራኒ የታ ጋር ብልት በብልት

ለ. የተቃራኒ የታ አፍ በብልት

ሐ. የተቃራኒ የታ ቂጥ በብልት

መ. ግብረሥጋ ሰዶም

