A KNOWLEDGE, ATTITUDE,AND PRACTICE STUDY ON SEXUAL PRACTICES RELATED TO HIV TRANSMISSION AND PREVENTION AMONG MALE RESIDENTS OF ARBA MINCH TOWN SOUTHWEST ETHIOPIA

A Thesis Presented to
The School of Graduate Studies
Addis Ababa University

In partial Fulfilment
of the Requirements for the Degree
of Masters of Public Health in
Addis Ababa University

By
Abraham Teklu M.D

April 1991

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

A KNOWLEDGE, ATTITUDE, AND PRACTICE STUDY ON SEXUAL PRACTICES RELATED TO HIV TRANSMISSION AND PREVENTION AMONG MALE RESIDENTS OF ARBA MINCH TOWN SOUTHWEST ETHIOPIA

by

Dr. Abraham Teklu

DEPARTMENT OF COMMUNITY HEALTH,

FACULTY OF MEDICINE

Approved by the Examining Board.

Adanetch Kidanemariam, CNM.MPH.MSPH.Dr.PH _____
Chairman, Department Graduate Committee

Dr. M. Fletcher _____
Advisor

Prof. N. Cunningham _____
Examiner

Dr. Gebre Selassie Okubagzhi _____
Examiner

Prof. A. Segall _____
Examiner

Dr. S. Shapiro _____
Examiner

Dr. C.Larson _____
Examiner

ACKNOWLEDGEMENTS

I hereby express my whole hearted gratitude to the International Development and Research Centre (IDRC), for fully funding my research, without which the thesis would never have materialized.

I am deeply indebted to Ato Mulugeta Ersumo (Head North Omo RHD) for all his support, without which the successful completion of the data collection would have been seriously hampered. My gratitude also goes to all the research personnel for their interest, responsibility and their honesty throughout the process of data collection. My special thanks is also due to all the study participants for their willingness to participate in the study. I thank Dr. Mengistu Mehret (DAC) for providing me with the necessary serosurveillance data.

I am extremely grateful to my advisor Dr. Madeleine Fletcher for her concerned, meticulous, consistent or, in general, invaluable advisory input to my thesis well from the very beginning to the very end. She made me feel more confident and be more hard-working than ever before. I would like to thank Ato Desta Shamebo for his interest and intense desire to help. I am very grateful to Dr. Charles Larson for his input in formulating the thesis topic. I am also grateful to W/rit Yemisirach for her patience in doing all the typing jobs.

I am very grateful to my father Ato Teklu Abere, my mother W/ro Tirunesh Belay, and to all my siblings for their support, stimulus, encouragement, and their sustained concern about me which made each day more comfortable and inviting for my work than each day before. Moreover, special thanks are due to my mother who typed all the material prepared in Amharic. I duly appreciate the support and encouragement granted to me by my sister W/ro Aster Teklu and her husband Ato Ephrem Bekele.

Finally, words cannot say how much I am grateful to my sweetheart Semret Estifanos for her extreme patience, encouragement and reassurance. Seme, had once again managed with her true love to keep me feel we were together and provided me with several months of uninterrupted concentration.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

ABSTRACT

A cross-sectional survey was conducted among 355 randomly-selected urban male residents in Arba Minch town, southwestern Ethiopia, to investigate their knowledge, attitudes, and practices related to HIV transmission and prevention, with emphasis on condom use. About half (48.8%) of sexually-experienced respondents reported one or more high-risk sexual practices. More than a fifth (22.0%) had had sex with several partners in the previous three months, and 42.3% had experienced sex with prostitutes, including 11.1% in the previous three months. Extramarital sex and sex with prostitutes in the previous three months were reported by 14.5% and 7.7% of married participants, respectively. Age ($P<0.01$) and occupation ($P<0.001$), and age ($P<0.01$) and current marital status ($P<0.01$), respectively, were associated with sex with prostitutes ever and sex with prostitutes during the previous 3 months. About one fifth(21.4%) of sexually-experienced men reported ever having used condoms, including 9.6% reporting consistent use of condoms. Condom use was significantly associated with age, education, and occupation ($P<0.0001$ for all three). Significantly higher rates of condom use were found in those who reported one or more risk behaviours($P<0.001$), as compared to those who reported none. Condom use was also strongly associated with knowledge about its role in AIDS prevention($P<0.01$). Almost half(43.3%) of condom non-users didn't know what condoms were. A majority of respondents(93.8%) had heard about AIDS, while 67.4% had heard about condoms. Only 57.3% of respondents knew about the role of condoms in AIDS prevention. A majority of respondents knew about HIV transmission through sex (97.6%), and from prostitutes to clients (99.1%). However, wrong beliefs were also common (10.9-23.9%). Over half(53.0%) of the respondents perceived self-risk for HIV infection, of which 81.7% reported having changed their sexual behaviours. The association between perception of risk and change of behaviour was statistically significant($P<0.00001$).Those who reported one or more high-risk practices were also significantly more likely to perceive self-risk and report changes in behaviour, than those who denied any of the risk factors.

The potential for improvement of the situation through a carefully planned and targeted educational intervention and through utilization of every available media, is very high.

INTRODUCTION

It was almost a decade back, that the first case of Acquired Immunodeficiency Syndrome (AIDS) was diagnosed in the United States (U.S.) (1). Since then, alarming rises have been occurring both in the number of countries which report to the World Health Organization (WHO), and in the number of cases reported. Simultaneously, both the number and type of research studies have also been increasing, for the purpose of clarifying the various virological, clinical, epidemiological and socio-cultural aspects of the disease, as part of a worldwide effort to understand and control the spread of the AIDS epidemic.

The human immunodeficiency virus (HIV) was identified as the cause of AIDS in 1983 (2). HIV transmission from infected to uninfected persons occurs through three main routes, namely, the sexual (both homosexual and heterosexual), parenteral, and perinatal. Various lines of evidence favour the predominance of heterosexual transmission of HIV infection (3-5). Moreover, the 1:1 sex ratio of African cases also shows that the likelihood of perinatal transmission of HIV is higher than that in western countries, where homosexuals and intravenous (i.v.) drug abusers are among the predominantly afflicted groups of the population. Even though there are differences in the epidemiologic patterns of HIV infection between countries (6), a united worldwide effort is required to control the spread of this pandemic.

To date, no cure for AIDS or vaccine to prevent HIV infection has been found. Moreover, the likelihood of obtaining either of

these is extremely low in the foreseeable future. Thus, the most important and probably the best action against the spread of the epidemic at the moment is widespread public education to encourage the adoption of risk-reducing behaviours. As AIDS is a social disease, its spread and control will be largely determined by social and cultural factors, the most critical one being the sexual behaviour of people.

Since individual behaviour is responsible for most of the transmission of AIDS, active participation of both infected and uninfected persons in changing their behaviours is required in order to break the chain of transmission. Hence, the focus of prevention is believed to be behaviour rather than infection status (7,8). Among the characteristics or possible determinants of risk behaviour are socio-demographic characteristics, the individual's knowledge about AIDS - although not sufficient alone to bring about behavioral change (9-13)-, attitudes towards AIDS as well as towards the sexual behaviours related to its transmission or prevention, and perception of self-risk.

Of greater concern for AIDS prevention in Africa is heterosexual transmission(7,14,15), for which a few protective practices, such as limiting the number of sexual partners and/or using condoms both consistently and correctly with every act of sexual intercourse, may reduce substantially the risk both of transmitting and of acquiring HIV infection, however, incorrect use and condom breakage alothough rarely reported, could be limitations to its protective role. Therefore, preventive interventions should

optimally be preceded by attempts to obtain sufficient information concerning the sexual behaviours of individuals and groups of the population (eg.8,14), and their knowledge, attitudes and use of preventive practices, in particular condoms (eg.15,16).

The prevalence of high-risk sexual practices related to HIV transmission or practices against its spread - particularly use of condoms - is not known in Arba Minch, southwestern Ethiopia. No information is available either concerning the population's knowledge of and attitudes towards AIDS. A serosurvey carried out in 1986 by the Department of AIDS Control (DAC) of the Ministry of Health (MOH) of Ethiopia revealed a seropositivity rate among prostitutes working in Arba Minch of 8.2% (17). The seroprevalence of HIV infection among the general population of the town is still unknown. Nevertheless, in designing preventive intervention measures, knowledge of infection status is less important than that of the prevalent high-risk and preventive sexual behaviours. Since AIDS prevention cannot be effective unless all sexually active persons consistently engage in safe sexual practices, it follows from this that efforts to intervene should take place whether the prevailing rate of infection is known or not.

Arba Minch town is located about five hundred kilometres southwest of Addis Ababa, the capital city of Ethiopia. This town has undergone a rapid urbanization process since 1986, with a large influx of people coming from different parts of the country to work on the construction of the new textile factory. The town, in addition to being itself a tourism area, also serves as a transit

for tourists heading for the Mago National Park, and for a number of heavy truck drivers and their assistants, as well as for many daily labourers, the latter two groups going to the Omo Irrigation Project. It seems legitimate to postulate that these factors must have contributed to the introduction and in part to the spread of HIV infection in Arba Minch, and are likely to continue doing so in the future.

This study was conducted in Arba Minch town and aimed at determining the prevalence rates of sexual practices related to the transmission or prevention of HIV infection, describing people's knowledge and attitudes towards AIDS and towards those practices, particularly condom use, and at providing information based on the analyses of the interrelations between people's knowledge, attitudes, and practices for future interventions. Furthermore, the relevance of this study lies in its envisaged ability to provide baseline data against which to monitor changes resulting from any proposed preventive intervention, to enable professionals to design appropriate and feasible interventions against the spread of HIV infection, such as health education and condom promotion and distribution, and lastly, to provide a useful supplement to what is already known about the transmission and prevention of HIV infection at the national level.

As one of the main areas of focus of the study was on the use of condoms,which is mainly a male method,and since little is known worldwide regarding attitudes of men towards condoms (18,19),a decision was made to restrict the study to males only.

Another reason for this restriction is that since males are allowed greater sexual freedom than are females, according to the majority of traditional Ethiopian cultures, they are probably more active agents for the spread of HIV infection at this time than are females (excepting prostitutes), particularly in urban centers.

Arba Minch was selected for the study because it was the area of assignment for the principal investigator, as the manager of the Awraja Health Department, during the periods of his community residency programs.

LITERATURE REVIEW

The AIDS epidemic is already a worldwide public health problem, with increasingly large numbers of cases being reported from many countries in each continent. Although AIDS was first diagnosed among homosexuals (1), it is now a well-documented fact that every sector of the world's population has been affected and is at varying levels of risk of infection.

It was shortly after the diagnosis of the first case of AIDS in the U.S. that the first African cases were diagnosed in Europe (3), indicating that the likelihood of the presence of the disease on the African Continent was high. The initial development of the disease in Ethiopia was first noted about two to four years following the development of AIDS in other African countries, the first case having been diagnosed in 1986 (20).

The cumulative number of cases which are reported to the WHO has been growing exponentially. As of December 1989, the cumulative number of cases reported worldwide was 203,599, and this increased to 298,914 cases as of October 1990. The corresponding cumulative figures for Africa were 38,248 and 75,642, and for Ethiopia 236 and 496 (21,22). These figures clearly demonstrate that the cumulative number of AIDS cases increased by almost one half (46.8%) worldwide, almost doubled (97.8% increment) in the case of Africa, and more than doubled (110.2% rise) in Ethiopia, in less than one year. Moreover, the cumulative number of African cases showed an approximate five-fold increase within a period of about two years,

between 1 June 1988 and 31 July 1990, from 11,530 cases to 66,798 cases. The WHO indicated that the actual situation was in fact more serious than that cited above, by stating that as of June 1990 there were an estimated total of 650,000 cases which had already occurred, and that a further 8 to 10 million persons had already been infected by HIV worldwide (23). It has been estimated that about 130,000 persons have already become infected by 1990 in Ethiopia. Further projections based on the progress of HIV infection between 1988 and 1989, i.e., a 60% rise in the prevalence of HIV infection, show that by 1994, approximately 29,000 new AIDS cases are expected in Ethiopia, and that the cumulative number of patients will by then exceed 70,000 (20).

TRANSMISSION

Several earlier studies have confirmed that HIV transmission occurs through three main routes of spread, namely, the sexual (both homosexual and heterosexual), parenteral, and perinatal. Based on the relative frequencies and social features of those three types of transmission, and the possible date of HIV introduction or extensive spread into different areas, three distinct epidemiologic patterns were identified (6): pattern 1, where homosexually and parenterally-infected cases are most commonly encountered; pattern 2, where the predominant mode of spread is through the heterosexual route; and pattern 3, where all three routes were reported to occur, but each at a low prevalence. Various studies have revealed that the predominant mode of spread

have been identified as high-risk factors both in prostitutes and among the general population (9). Among men, truck drivers, soldiers, and other members of the workforce, who migrate between urban and rural areas or from place to place, were found to be at risk for contracting as well as transmitting HIV infection. While married men could bring HIV infection home to infect their wives and ultimately their children, single individuals in Africa may also be at high risk as they are likely to encounter one or more casual premarital sexual partners (8).

PREVENTION AND CONTROL

As there are no known cures for AIDS or vaccines to prevent HIV infection, the highest worldwide priority has been given to the control of the epidemic. To this effect, the Global Programme on AIDS (GPA) of the WHO, set a common course - the global AIDS strategy- with three main objectives, namely, the prevention of HIV infection, reduction of the personal and social impact of the infection, and international efforts against AIDS (33). Preventing HIV transmission is thought to be achievable, because HIV is transmitted through the behaviour of individuals, and through a few recognized health care procedures. Of the various types of specific preventive measures available, the most cost-effective and probably efficient means of controlling the spread of AIDS in Africa and elsewhere, is health education of the general population and those engaging in high - risk behaviours (19,24,29,34). It is now very clear that HIV infection is spread mainly through identifiable and

voluntary behaviours of individuals. Based on this reality, the GPA recommended that education is the key to AIDS prevention, because HIV transmission can be prevented through informed and responsible behaviour. Thus, our focus of prevention at present should be towards providing education to produce a change in attitudes and ultimately, a modification or change of high-risk behaviours. Of greater concern for AIDS prevention in Africa, is transmission through the usual heterosexual routes, for which a few preventive practices such as limiting the number of sexual partners and/or using condoms both correctly and consistently in every act of sexual intercourse, may reduce the risk of HIV transmission (16,18,35). The fact that it is behaviour, rather than group membership, that puts people at risk for AIDS, should make us less concerned about the spread of HIV infection from the so-called "high-risk groups" to the population as a whole, but rather,it should encourage our endeavour towards enabling those at risk to adopt risk-reducing behaviours. For this purpose, the sexual behaviours, knowledge, and attitudes of people in relation to their sociodemographic background and sexual orientation will need to be well-understood (36,37). While determination of the overall prevalence of high-risk behaviours over time is important to show if there is a reduction or an increase of risk in specific populations, an initial assessment in various subgroups is also essential in determining intervention priorities. Furthermore, understanding the possible predictors and correlates of high risk is essential in identifying conditions under which individuals may

or may not respond to proposed interventions (37).

Results from several studies exploring AIDS-related knowledge, attitudes and practices among various population groups are currently available. A few of those studies were conducted among the general population, both males and females, while others were restricted to specific groups, e.g. defined by gender or occupation.

PREVALENCE OF HIGH-RISK SEXUAL BEHAVIOURS

A number of factors have been identified that place sexually-active heterosexuals at high risk of acquiring or transmitting HIV infection. Among these factors are having sex with multiple sexual partners, including extramarital sex, sexual intercourse with prostitutes, and having a past history or concurrent episodes of STDs. In order to direct a preventive intervention toward an appropriate target group, the prevalence and distribution of such high-risk behaviours among the population should be well-understood.

A study carried out in Montreal, Canada, revealed that of 240 sexually-experienced Haitian residents, 22.5% reported two or more sexual partners during the previous year (15). In Kigali, Rwanda, sexual intercourse with more than five partners in the past 12 months was reported by 6.3% of the participants, though the results are of limited generalizability, as the sample was very small and subjects were hospital visitors (38).

Apart from the general population, similar studies have also

inquired about experiences of specific groups. A study involving 13 to 18 year-old high school students from several schools in the U.S. showed that 27 % to 76% (median: 56%) had sexual intercourse at least once, and 7% to 40% (median: 21%) of the students reported ever having had four or more sexual partners, the males having reported significantly higher number of partners than females (39). Of 1532 male and female secondary school students studied in Zimbabwe, 46.4% of males and 2.7% of females reported having had sexual intercourse, and 37.8% of males as compared to 2.0% of females having had two or more partners. Furthermore, 115(15.8%) males reported having had sex with prostitutes (40). These results show that even those who are very young and who seem to be beginners, are engaged in high-risk sexual behaviours, especially in sexual encounters with prostitutes. Moreover, promiscuous behaviour seems to predominate in males as compared to females.

The prevalence of high-risk sexual behaviours among the male population has also been investigated by some investigators. One-third of 1,155 Danish men reported having had sexual behaviours which may be associated with high risk, including sex with more than one partner in the past 12 months, sex with prostitutes, or sex with other men (41). In a Zimbabwe study involving 722 male heads of households, 31.2% reported having had sex with one or more partners, in addition to their wives, in the previous 12 months, and 33% reported having contracted one or more episodes of STD in the past (19). Among 494 randomly-selected male residents in Jimma town, Ethiopia, nearly half had experienced sex with prostitutes,

including 18% in the previous month. More than ten percent of the respondents reported having had one or more sexual partners in the previous month, and a past history of one or more STDs was reported by 38.8% of the participants (11). The proportion of males reporting sex with prostitutes was 38.5% in 2753 male students from Zimbabwe (42), and 24.7% in 173 working-class men from Bulawayo, Zimbabwe (43). All of the studies cited above indicate that high-risk sexual practices are common in almost every part of the world. Although the prevalence rate is subject to variations from one area to another, even the lowest rate should be treated as potentially dangerous in terms of spreading HIV infection.

CONDOM USE

Abstinence from sex or a mutually faithful monogamous sexual relationship play a major role in the prevention of HIV infection among those who follow these rules. A regular and correct use of condoms with every act of sexual intercourse, may substantially reduce the risk of HIV infection, in those who couldn't stay with one partner faithfully (44,45). The results of those few studies conducted in some countries indicate mostly unsatisfactory prevalence rates of condom use, as compared to the rates of high-risk sexual practices. Some of the studies looked into experiences of highly selective groups of the population, such as attendants of STD clinics in San Francisco and prostitutes in Africa. Of the 341 men and women in the San Francisco study, almost all (97%) reported having used condoms in the past, 82% at least once in the

past 12 months, 60% at least once during the previous 2 months, and 25% during their last intercourse (46). Estimates of the prevalence rates of condom use among three groups of prostitutes in Kenya ranged from 7% to 10% (47). Both studies have indicated that even in such high-risk groups, the prevalence rates of safe sexual practices are not optimal. The study in prostitutes may also indirectly indicate prevalence rates of condom use by clients equal to or less than that of prostitutes. Data from other studies also show somewhat similar low rates. Of the 240 Haitians, only 11.7% reported having used condoms often or always (15), while about 36% of the 722 Zimbabwean male residents said they had used condoms sometime in the past and 5.3% currently (19). The study in Jimma revealed that only 8% of the participants who had had sex with prostitutes in the previous month reported regular condom use, while 17% sometimes did so (11). Although of limited comparability, each of the above studies have shown very low rates of condom use which may not fulfil the requirement for halting the spread of HIV infection.

What factors affect or determine the use of condoms have not been adequately investigated by most of the studies cited above. However, a few important factors were suggested by those who addressed these questions. In the San Francisco study, a low rate of condom use among males was associated with the use of alcohol or other drugs at their most recent sexual intercourse and with reported disagreement by their partner against its use. Among females, condom use was lowest by those who reported that their

partners did not want to use condoms, who believed condoms reduce sexual pleasure, who reported having had sex with a steady partner, or who were black. In contrast, the most frequent reason for condom non-use by Zimbabweans was lack of knowledge about condoms, followed by thoughts that condoms interfere with satisfactory intercourse. While the study of prostitutes in Kenya revealed that the rates of condom use, after educational intervention and condom promotion, increased from 7-10% to 58-81%, and that high rate of use was most frequently due to concern for health (47), no association was found between condom use on the one hand, and perceived risk for HIV infection, knowledge about HIV transmission, and condom effectiveness, on the other (46). These inconsistent findings indicate the need for further studies to clarify the determinants of condom use or of non/inconsistent use.

KNOWLEDGE ABOUT AIDS AND CONDOMS

Even though, in the final stage, it is the individual who decides to change his/her behaviour, information about AIDS should be given to all. Moreover, health education is still the cheapest method available for the prevention and control of the AIDS pandemic. Almost all of the studies done in many areas of the world and particularly in African countries revealed that still some gaps in knowledge about AIDS exist. These gaps mostly concern the modes by which HIV infection can and cannot be transmitted from person to person.

Among the 286 Haitians residents studied, 81% gave correct

answers about AIDS, but half of them also believed that HIV transmission could occur through mosquito bites and 35.8% by sharing foods and utensils with an infected person (15). About 93% to 100% (median 98%) and 74% to 98% (median: 88%) of students, respectively, in the U.S. study knew about HIV transmission by sharing needles and through sexual intercourse without using condom, while 33% to 78% and 15% to 56%, respectively, wrongly believed HIV transmission could occur by mosquito bites or by sharing toilet seats (39). A large proportion of Zimbabwean secondary school students believed that HIV transmission could occur by sharing drinking cups (69.3%), or by kissing (63.8%), or by mosquito bites (55.9%) (40). False beliefs about HIV transmission were also common in prostitutes in Bulawayo, Zimbabwe, with 90.3% believing it could occur through sharing toilets with infected people, 89.4% through kissing, 86.7% through breathing air from infected people, 74.3% through shaking hands, and 42.5% through mosquito bites (50). A large proportion (82%) of subjects in the Jimma study believed that HIV could be transmitted through kissing, 53.6% through drinking dirty water, and 69% by shaking hands (11). Agreement with the protective role of condoms against HIV infection was given by 88.3% of boys and 74.9% of girls in the Ottawa, Canada high school (48), by 97% of men as well as 96% of women in the San Francisco study (46), by 75.1% of high school students in Zimbabwe (40), and by 49.6% of the respondents in the Jimma study (11). These studies indicate a low level of awareness about condoms in African countries, as compared to western

countries. Concerning the relationship between knowledge about AIDS and high-risk practices, most of the data in the above studies revealed that despite high knowledge levels about HIV transmission, many of the respondents reported high-risk sexual behaviours. However, when one looks into the proportions of those with wrong beliefs about HIV transmission,one may be uncertain about the amount of true information that the population has gained. Thus, still a lot seems to have remained in terms of conveying clear and complete messages to the appropriate target groups, based on the above findings.

ATTITUDES TOWARDS AIDS

The attitudes of people towards AIDS need to be understood, as one of the factors that influence people's behaviours. Apart from attitudes towards persons with AIDS, an individual's perception of self-risk or vulnerability to HIV infection might play a major role in the person's decision to adopt safe behaviour.

In the Haitian study, subjects strongly favoured mandatory HIV testing, and the majority HAD very positive attitudes and beliefs toward the promotion of condoms (15). More than one half of girls and 36.9% of boys in grade 7 and 8 in Canada, said they were afraid that they might get AIDS (48). Of 211 first-year undergraduate students, about half stated that they practice "safer sex" as a result of their fear of AIDS, while 83% of sexually-experienced students reported the same because of their worries about AIDS. Overall, 60% of students expressed concern about the possibility of contracting AIDS. However, a number of students did

not consider themselves at risk and continued to engage in high-risk behaviours (10). In the study of Danish men, only 41% to 59% of those who reported one or more risk factors also perceived themselves as being at risk, and 47% to 54% of those reported having changed their behaviours, as compared to 22% of those who perceived risk without reporting risk factors (41). A highly significant association was also observed between worry and concern about AIDS and reduction in risk behaviour in a study on homosexuals (49). However, in both the above studies, a high level of knowledge about AIDS was not associated with perception of risk or worry and concern about AIDS. The results of these studies clearly indicate that perception of self-risk for HIV infection is a very important factor for an individual to change a previous high-risk behaviour and adopt a risk-reducing behaviour.

Only one KAP study on AIDS has been carried out in Ethiopia so far (11). Thus, this study was conducted in order to address some of the questions raised in the preceding paragraphs.

OBJECTIVES

GENERAL

The overall objective was to determine the occurrence and distribution of sexual practices related to HIV transmission and prevention among male residents of Arba Minch town, in relation to their knowledge and attitudes concerning AIDS and these practices, for future preventive and control interventions.

SPECIFIC

The study had the following specific objectives:

i. To determine the prevalence rates of sexual practices which are risk factors for HIV transmission among randomly selected male residents of Arba Minch town.

ii. To determine the prevalence of condom use among the same study population.

iii. To elucidate their knowledge of and attitudes towards AIDS and towards safe and unsafe sexual practices, with particular emphasis on condoms and their use.

iv. To describe the relationships of the above three groups of factors to socio-demographic characteristics of the study population.

v. To describe the relationships between subjects' knowledge and attitudes and their sexual practices.

vi. Finally, based on the findings of the study, to identify and recommend appropriate and feasible preventive interventions against the spread of HIV infection in Arba Minch town.

SUBJECTS AND METHODS

STUDY DESIGN

A cross-sectional survey on knowledge, attitudes, and sexual practices related to the transmission and prevention of HIV infection was carried out over a period of one month, among males aged 15 to 49 years and who were randomly selected from residents of the six kebeles (ie. Urban Dwellers Associations) in Arba Minch town.

POPULATION

The source population consisted of all males between the ages of 15 and 49 years inclusive and who resided in kebeles 01 through 06 of Arba Minch town. The study population was drawn from the above source population through random selection of subjects. The following criteria were set to enrol only the appropriate subjects into the study:

Inclusion Criteria

Each subject was enroled into the study only after he was found to have fulfilled the following criteria for inclusion:

a. A male person aged between 15 and 49 years and who resided in either of the six kebeles of Arba Minch town;
b. A permanent resident of the town or who lived in Arba Minch at least for the previous six months;
c. The subject should consent to the interview.

Exclusion Criteria

The following subjects were excluded:

a. those who did not understand and speak either Amharic, Gamugna, or Konssigna languages, these being the languages spoken by the majority of the town's residents;

b. those with any acute or chronic physical or mental illness that may hinder communication with the interviewer and preclude completion of the questionnaire; and

c. those with mental retardation.

SAMPLING PROCEDURES

The first step was the enumeration of households throughout the six kebeles, during which the collection of data on the total number of dwellers and eligibles was completed. Then the households to be included in the sample (see sample size calculation below) were randomly selected from each kebele by proportional allocation, using a table of random numbers. Next, the randomly selected households having one or more eligibles were re-visited and from each of them, only one eligible was selected randomly by the lottery method.

Enrolment Procedures

In households where more than one eligible resided, only one was randomly selected in the presence of all or some of the eligibles. Persons who were selected in their absence, were initially informed of their selection by family members, and then contacted by the interviewer. The involvement of eligibles in such households in the selection process has enabled them to realize the random nature of the selection and increased their confidence in the study, which in turn has contributed to the minimization of

non-response. In order to further minimize non-responses, each randomly-selected subject was allowed to decide on the date, time and place of his interview at his own convenience. An informed consent was secured from each selected subject just after informing him about his selection and before appointing him for the interview (see Appendix 1a for the consent form in its English translation and 1b for the Amharic version).

Sample Size

The prevalence of high-risk sexual behaviours among the male population of the study area was unknown. Thus, in order to obtain the largest and possibly more representative sample size, the investigator took an estimate of 50% (0.5). The study aimed at obtaining an estimate of prevalence rate within 5 percentage points of the true rate and with 95% certainty (ie., type 1 error = 0.05). By substituting these figures for the appropriate letter symbols in the following formula, the number of households obtained from the calculation was 384 (see calculation below).

Formula: $$n = \frac{Z^2(1 - \text{alpha})\ (P)\ (1 - P)}{L^2}$$

Where n = The required size of the sample;

P = The estimated prevalence rate, here 0.5;

Z(1-alpha) = The value of the standard normal distribution corresponding to a significance level of alpha (here 1.96 for a two-tailed test at the 0.05 level); and

L = The margin of error, here 5% (0.05).

For the purpose of compensating for households without eligibles and for non-responses, a safety margin of 20% was thought to be adequate and was added to the figure obtained by the previous formula, as follows:

$$n = 384 + (384 \times \frac{20}{100})$$

$$= 384 + 76 \text{ , and the sample size became 460.}$$

Just following the enumeration of households in each kebele, it was realized that an average of 27.5% of households, ranging from 15.7% in kebele 06 to 51.3% in kebele 02, did not have any eligible. Because of this major early finding which would have a serious impact on the sample size, the safety margin was increased to 50% and the sample size was further raised to include 576 households.

MEASUREMENT

A structured questionnaire was developed and used to determine whether or not study participants engaged in any of the sexual practices related to HIV transmission or prevention, to assess their knowledge about and attitudes towards AIDS and the sexual practices related to its transmission and prevention, and to assess the relations of their knowledge and attitudes to their practices. The questionnaire was initially prepared in English and then was translated into Amharic (the official language of Ethiopia) by two persons each twice (as a check on the accuracy of the translation). Significant differences were not encountered between the four

translated versions and so there were no difficulties in reconciling those versions into one (see Appendices 2 and 3 for the English and Amharic versions of the questionnaire, respectively).

A total of 43 questions were included in the questionnaire in addition to the demographic items. An introductory item was added, consisting of a series of three simple questions unrelated to the study, which were included so as to enable interviewers to verify the respondents' understanding and correct application of the explanations and instructions given. To prevent a possible contamination of responses to questions on sexual practices, by the awareness which would possibly be created by the knowledge and attitude items, the questionnaire was designed in such a way that responses of participants were obtained to practice, attitude, and knowledge items, in that sequence. In order to encourage respondents to give complete and honest answers about their sexual experiences, they were allowed to record their answers to practice items themselves on an anonymous basis, on an answer sheet especially designed for this purpose (see Appendix 4)- adapted from that used in the Jimma study (11)- and to be sealed in an envelope after completion. In order to accommodate illiterate respondents, questions were to be answered by circling a tick or an 'X' to indicate a yes or no response, respectively, or by making a tally for these items requiring a number response. The answer sheet to be used by the interviewers to record responses given by respondents for the rest of the items, was also anonymous.

The questionnaire was pretested by administering it to 30 randomly selected male residents (not part of the study population), for the following main purposes:

a. To check and ensure the appropriateness and understandability of questions,

b. To ensure acceptability of questions by assessing politeness of words and phrases, and deciding on which ones needed to be left as such, to be modified, or omitted,

c. To determine whether there was a need to modify any question in any way in order to improve the quality and/or quantity of responses,

d. To obtain an estimate of the average length of time that a complete interview would require, and

e. To evaluate the neatness, completeness, and proper recording of responses by each interviewer, and to make the necessary corrections in the questionnaire.

Although no major changes had to be made in the questionnaire, the pretest revealed deficiencies in the interviewers' preparation, which were corrected though a retraining period (see section on data collection below).

Variables

In order to achieve the objectives of the study, information was obtained from each participant pertaining to the following groups of variables.

Outcome variables

1.the prevalence of high-risk sexual practices, meaning those sexual practices which may put a subject at risk of contracting or transmitting HIV infection, when compared to subjects who don't engage in such practices; this group includes or more of the following:

a. sexual intercourse with more than one sexual partner, including extramarital sex,
b. sexual intercourse with a prostitute - a female who asks and accepts a payment (in cash) for the sexual encounter she may have with any person as her means of living,
c. anal intercourse, and
d. homosexual intercourse.

2. the prevalence of a preventive sexual practice, i.e. the frequency of condom use during sexual intercourse, and of consistent use.

The recall period for the high-risk sexual practices was the previous three months, and for anal and homosexual intercourse it was a life time experience. For condom use, both a lifetime experience and whether it is used always or not were inquired.

Variables studied as they relate to the outcome

a. Sociodemographic variables: age, education, occupation, marital status, ethnicity, and religion.
b. Attitude variables: Towards premarital sex, condom use, perception of risk, and change of behaviour since hearing about AIDS.

c. Knowledge variables: about AIDS, asking a respondent if he ever heard of AIDS, what he thinks it is, how one can get it and how one can prevent it, its curability, and sources of information,whether it makes a person sick,whether it kills,whether it affects a man or a woman, plus eight additional questions about the routes of transmission; about health risks of sex with prostitutes and extramarital sex; about condoms, asking if a respondent ever heard of it and the sources of information, why it is used and how often the same condom should be used, where one can obtain it from, and whether it is useful in AIDS prevention.

DATA COLLECTION

Since the study inquires about a respondent's private life experiences, which require both complete and honest responses, and with the assumption that people are used to being asked many private and highly sensitive questions by health professionals, a decision was made to use health workers as data collectors. Thus, a total of eight health professionals were selected from within the community based on the following criteria.

-age between 30 and 40 years inclusive,

-male gender,

-married, because married persons tend to have more social interactions and to inspire more respect and trust than single ones,

-able to understand and speak Amharic, Gamugna and/or Konsigna, and

-residence, i.e. at least one data collector from each of the six kebeles.

Moreover, two professionals (one M.D. and a pharmacist) were hired as supervisors.

All the data collectors and supervisors were trained on all aspects of the study and on the process of data collection in particular, based on a training manual which was prepared for this purpose (available on request from the author). Using this manual, training was conducted over a ten-day period through lectures, discussions, demonstrations, and role-plays, in which each trainee was given the chance to play the roles of both an interviewer and a respondent. The supervisors were also trained on how to check each completed answer sheet before accepting it from the respective interviewer. As there would be no chance for an interviewer to contact any respondent following the interview(in order to keep the anonymity of the study),all interviewers were given a re-training and were emphatically instructed, based on the findings of the pretest, to take the highest possible care throughout each interview session to record the responses correctly and completely.

Each interviewer was assigned in his kebele of residence, where people would be most familiar with him and his job, so that he would not be seen and treated as a stranger, and to facilitate his task in establishing a rapport and in gaining people's confidence and trust. Moreover, the same person was made responsible in his given place of assignment for all tasks related to the enumeration, enrolment, and data collection processes. This

seemed to assist an interviewer in his effort to establish an effective and fruitful rapport with the respondents.

Each page of an answer form was given the same code number by the principal investigator, so that anonymity could be maintained strictly. The two supervisors collected from the investigator those coded answer sheets, envelopes for sealing the answer sheets on the confidential practice items, and other necessary materials, and distributed those to the interviewers under their supervision. Each interviewer then completed each answer form through conducting an in-person interview, and submitted these to his supervisor at the end of each day's sessions. Each interviewer was strictly instructed to always check and ensure the completeness of each questionnaire just before terminating the interview. At the end of each day's sessions or at a convenient time for interviewers (a few of them had to conduct interviews after 6^{pm}), the supervisors thoroughly checked the completeness, correctness, and clarity of each answer sheet, in the presence of the respective interviewer, and finally submitted those to the principal investigator, who checked every paper for the final time. The investigator also received an equal number of sealed envelopes which contained the participants' responses to the confidential practice items. Neither the interviewers nor the supervisors were allowed to open those envelopes.

These meetings between supervisors and interviewers at the end of each data collection day were used as an opportunity to discuss and solve any problem, to clear any ambiguities or

misunderstandings, and to provide an appropriate and possibly immediate solution to any difficulty which was encountered or anticipated by any of the research personnel. The period of data collection took place from 31st August to 29th September, 1990, ie., one month.

As a means of assessing the reliability of the collected data, it was suggested at the outset that re-visits to a few randomly selected respondents could be conducted, in order to determine whether the interview actually took place or not. However, it was thought that this procedure might offend respondents and might give them the impression that their anonymity had not been respected, and therefore might jeopardize the success of the study. Thus, no other feasible means was found to check the reliability of the data collected, and no attempt was made to validate the responses obtained from the participants, due to the anonymity as well as confidentiality required by the study.

DATA ANALYSIS

The second version of the statistical package for the social sciences (SPSS) and the fifth version of EPI-INFO computer programs were used to analyze the data collected in this study. Using the data entry system of the SPSS program, the raw data were entered, following which a frequency distribution was obtained for each item. Then each item was appropriately recoded and reduced to meaningful categories. The prevalence rates of all the outcome variables were calculated for the whole study population as well as for selected groups. The outcome variables were then cross-

tabulated with selected socio-demographic, knowledge and attitude variables to determine if any association existed. The Chi-square test and Student's t-test were used as appropriate to test the significance and strength of associations.

RESULTS

SAMPLING AND RESPONSE

A total of 4,492 households were enumerated within the six kebeles of Arba Minch town, of which 72.5% (3256) included eligibles,i.e. men between the ages of 15 and 49 years. The total population was 23,755, of which 4,750 (20%) were eligibles. A total of 576 households were randomly selected, but eligibles were found only in 439 (76.2%) houses. The response rate was 81% (355 of 439). Only 3.2% (14 individuals) refused to participate in the study. Of the remaining 70 households, there was no one to contact after three visits to each of 28 households, new residents were found in 42 households while their former residents could not be traced. Only four eligibles were excluded because of their health problems, namely, deafness (3) and psychosis (1), and in each case there were other eligibles in their respective households from which a participant could be selected for the study. The sampling process is presented in Figure 1 and the socio-demographic characteristics of those who refused to participate in the study in Table 1. Those who participated in the study (355 men) represented 7.5% of the total eligible population,and 92.4% of the actually desired sample size, i.e., 384.

SOCIO-DEMOGRAPHIC CHARACTERISTICS

The socio-demographic characteristics of the study population are shown in Table 1.

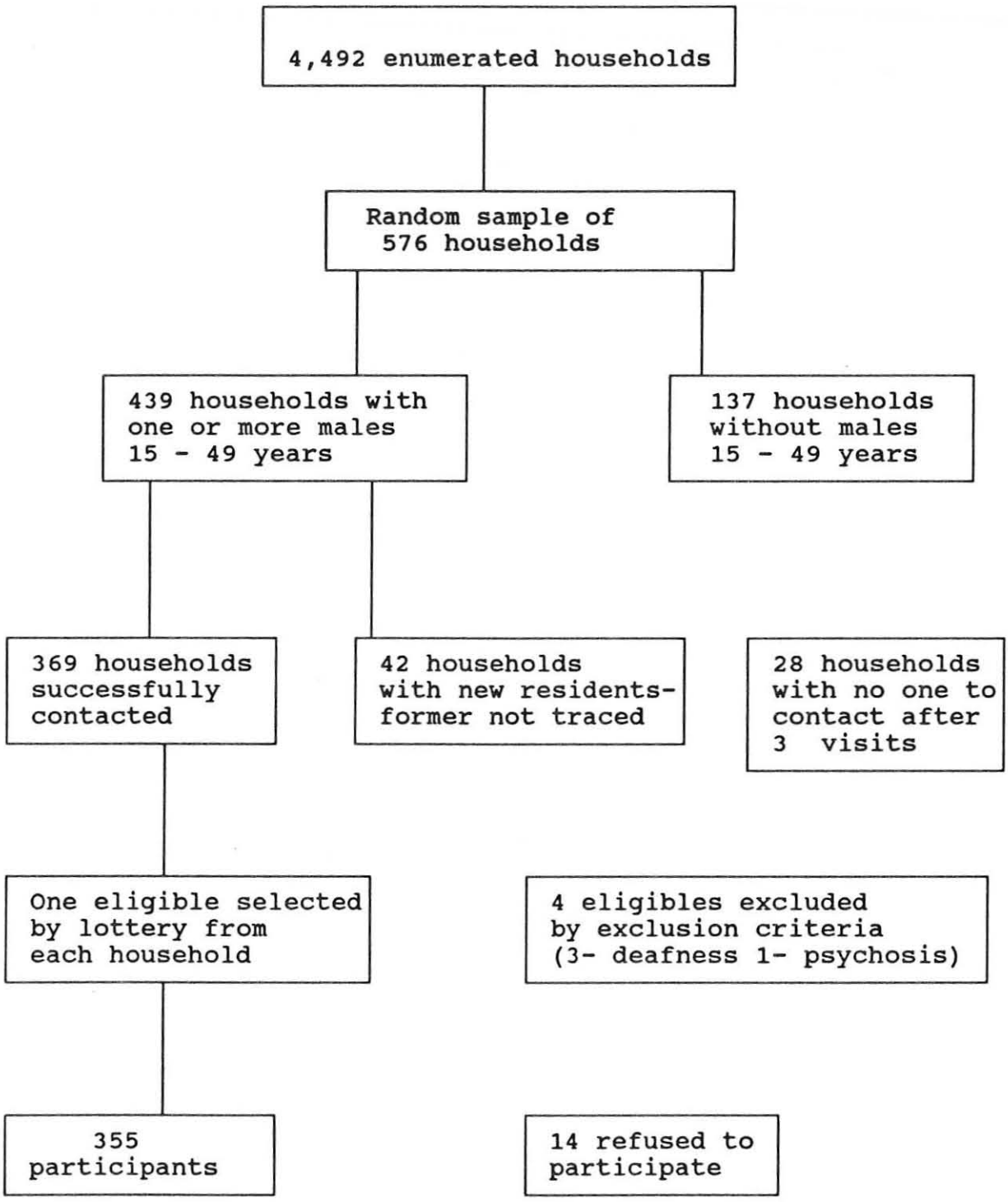

Figure 1. Sampling process

Table 1 . Socio-demographic characteristics of the 355 respondents and of the 14 men who refused to participate

Characteristic	Respondents Number(%)	Refusals Number(%)
	N=355	N=14
Age (years)		
15 - 19	51(14.4)	1(7.1)
20 - 24	33(9.3)	2(14.3)
25 - 29	66(18.6)	4(28.8)
30 - 34	68(19.1)	5(35.7)
35 - 39	66(18.6)	-
40 - 44	44(12.4)	-
45 - 49	27(7.6)	2(14.3)
Education		
Illiterate/No formal education	33(9.3)	-
Grade 1 - 6	91(25.6)	3(21.4)
" 7 - 12	175(49.3)	6(42.9)
" 12 +	56(15.8)	5(35.7)
Occupation		
Unemployed/daily labourer	64(18.0)	-
Student	45(12.7)	-
Government employee		
Administrative	46(12.9)	1(7.1)
Technical	99(27.9)	5(35.7)
Others	25(7.1)	-
Merchant/Trader	38(10.7)	1(7.1)
All others	38(10.7)	7(50.0)
Marital status		
Never married	117(32.9)	7(50.0)
Currently married	235(66.2)	7(50.0)
Divorced/Separated	3(0.9)	-
Ethnicity		
Amhara	142(40.0)	3(21.4)
Gamo	115(32.4)	1(7.1)
Wollayta	32(9.0)	5(35.7)
Oromo	30(8.5)	2(14.3)
Others	36(10.1)	3(21.4)
Religion		
Orthodox Christians	307(86.5)	10(71.4)
Other Christians	31(8.7)	1(7.1)
Muslim	17(4.8)	3(21.4)

The average age of respondents was 30.95 years (SD = 8.62 years), with both a median and mode of 30 years.

A total of 33(9.3%) respondents had no formal education, out of which 8 could neither read nor write, 3 could read only, and 22 could both read and write but had no formal education. The majority of respondents (65.1%) reported having attended high school.

Thirty-six kinds of occupations were reported by the respondents, and these were classified into seven categories by combining related occupations.

About two-thirds (66.2%) of the respondents were currently married and 32.9% were never married at the time of the study. The mean ages of these two groups were significantly different, 35.3 and 22.4 years, respectively ($P<0.0001$).

SEXUAL PRACTICES

Out of 117 never married subjects who responded, 73.5% (86 men) acknowledged having had sexual intercourse at least once in their life, while the remainder, 26.5% (31 men) denied any sexual intercourse. The mean age of respondents in the first and second groups were, respectively, 23.4 years (SD = 4.5 years) and 19.6 years (SD = 3.4 years) ($P <0.001$). Of the 31 men who denied having ever experienced sex, 23 were aged 15 - 19 years, 6 were 20 - 24 years, and 1 each between 25 - 29 and 30 - 34 years, respectively. Of the 89 currently unmarried but sexually-experienced respondents, 61 (68.5%) acknowledged having had sex in the past three months, as compared to 190(80.8%) of the 235 married men. The prevalence

rates of the different types of high-risk sexual practices reported by the 324 sexually-experienced respondents are shown in Table 2.

Among those aged 15-19 years, 54.9% were sexually-experienced, of which 28.6% had engaged in sexual practice with one or more partners in the past three months, and 10.7% had had sex with prostitutes, including 7.1% in the previous three months.

Only three respondents - two unmarried and one currently married - reported having had anal intercourse, each with only one partner in their lifetime. None of these men nor the other respondents reported ever having had homosexual intercourse. Five respondents declined to answer either question. Of the 324 sexually-experienced respondents, 158(48.8%) reported one or more high-risk sexual practices, leaving 166(51.2%) who denied any of the high-risk sexual practices on which information was sought(which did not include sex with multiple partners or extramarital sex prior to the previous three months).

Table 3 shows the prevalence rates of selected high-risk sexual practices in relation to the socio-demographic characteristics of the respondents. Respondents aged 15-19 years or students were significantly less likely than others to have had sex with several partners in the previous three months ($P<0.0001$ for both),or to have had sex with prostitutes in their lifetime ($P<0.00001$ and $P<0.0001$,respectively).

Table 2. Prevalence rates of self-reported sexual practices which are risk factors for HIV infection among sexually experienced respondents

Practice	Total ** Respondents	Number Reporting Practice	Prevalence Rate (%)
Sex with several partners(PTM)	324	71	22.0
No. of partners 2 - 3		(39)	
4 - 5		(32)	
Extramarital sex(PTM)	234***	34	14.5
No.of extramarital partners 1		(18)	
2		(11)	
3 - 4		(5)	
Sex with prostitutes ever	324	137	42.3
No.of prostitutes 1		(30)	
2 - 4		(63)	
5 -10		(22)	
20 +		(2)	
unspecified		(20)	
Sex with prostitutes (PTM)	323	36	11.1
No. of prostitutes 1		(19)	
2 +		(17)	
Sex with several partners plus with prostitutes (PTM)	323	17	5.3
Extramarital sex plus sex with prostitutes (PTM)	233***	10	4.3
Anal sex ever	319	3	0.9
Homosexual intercourse ever	319	0	0.0
One or more risk factors ever	324	158	48.8
Two or more risk factors ever	324	70	21.6

PTM - Previous three months

** - The questions on extramarital sex and sex with prostitutes in the previous three months were each not answered by one married respondent (different respondents for each) and the questions on anal and homosexual sex were each not answered by the same five respondents.

*** - Out of 235 married respondents.

Table 3. Prevalence rates of self - reported high-risk practices among 324 sexually-experienced respondents in relation to selected socio-demographic characteristic

Characteristic	Total Respondents	No. (%) of Respondents Reporting : Sex with several Partners P T M	Sex with Prostitutes Ever	Sex With Prostitutes P T M
Age				
(Years) 15 - 19	28	1(3.6)	3(10.7)	2(7.1)
20 - 29	92	24(25.8)	47(51.0)	19(20.4)
30 - 39	133	31(23.3)	60(45.1)	12(9.0)
40 - 49	71	15(21.4)	27(38.0)	3(4.3)
Education				
Illiterate/No formal education	33	10(30.3)	11(33.3)	1(3.0)
Grade 1 - 6	88	16(18.2)	35(39.8)	8(9.1)
7 - 12	147	29(19.7)	60(40.8)	22(15.0)
12 +	56	16(28.6)	31(55.4)	5(8.9)
Occupation				
Unemployed/daily labourer	61	13(21.3)	19(31.1)	9(14.8)
Student	22	0(0.0)	1(4.5)	1(4.5)
Government employees				
Administrative	46	11(23.9)	18(39.1)	6(13.0)
Technical	94	22(23.4)	48(51.1)	14(14.9)
Others	25	5(20.0)	7(28.0)	1(4.0)
Merchant/Trader	38	12(31.6)	20(52.6)	3(7.9)
All others	38	8(21.0)	24(63.2)	2(5.3)
Current marital status				
Unmarried	89	22(24.7)	42(47.2)	18(20.2)
Married	235	49(20.9)	95(40.4)	18(7.7)
Ethnicity				
Amhara	135	25(18.5)	63(46.7)	15(11.1)
Gamo	101	23(22.8)	35(34.6)	11(10.9)
Wollayta	28	6(21.4)	11(39.3)	3(10.7)
Oromo	26	7(26.9)	14(53.9)	2(7.7)
Others	34	10(29.4)	14(41.2)	5(14.7)
Religion				
Orthodox Christians	287	63(22.0)	122(42.5)	34(11.9)
Other Christians	20	7(35.0)	7(35.0)	1(5.0)
Muslims	17	1(5.9)	8(47.1)	1(5.9)

PTM - Previous three months

genital ulcer (12.5%), and for diagnoses, gonorrhoea (76.8%) and gonorrhoea plus chancroid occurring in the same person (12.8%). Among 28 sexually-experienced respondents aged 15-19 years, 2(7.1%) had had one or more episodes of STD in the past.

CONDOM USE

Since two respondents - one currently unmarried and not sexually-experienced, and one currently married, but with no reported high-risk sexual practice - were not willing to continue with the interview after they went through the first part, they were excluded from the remaining analyses.

About a fifth (21.4%) of the 323 sexually-experienced participants reported that they had used condoms at least once in their lifetime. Reasons for using condoms given by the 69 users included prevention of pregnancy and STDs,each mentioned by 45(65.2%), and prevention of AIDS, mentioned by 23(33.3%). Eighteen (26.1%) of the 69, said that they used condoms with all partners including their wives, 20(29.0%) only with wives, and 31(44.9%) used them with women other than their wives or with prostitutes only. Almost half of the condom users(31) used condoms always with the partners with whom they normally employed condoms. Only two respondents used the same condom for more than one act of sexual intercourse.

Table 4 shows the prevalence rate of condom use ever in relation to socio-demographic characteristics. Differences between

Table 4. Prevalence rates of condom use ever in relation to socio-demographic characteristics among 323 sexually-experienced respondents

Characteristic		Total Respondents	Respondents reporting condom use ever (%)	
Age				
(Years)	15 - 19	28	1(3.6)	
	20 - 29	92	27(29.3)	P<0.0001
	30 - 39	132	33(25.0)	
	40 - 49	71	8(11.3)	
Education				
Illiterate/no formal educ.		33	2(6.1)	
Grade	1 - 6	89	5(5.6)	P<0.0001
	7 - 12	145	32(22.1)	
	12 +	56	30(53.6)	
Occupation				
Unemployed/daily labourer		61	4(6.6)	
Student		22	1(4.5)	
Government employee				
Administrative		45	10(22.2)	P<0.0001
Technical		94	42(44.7)	
Others		25	2(8.0)	
Merchant/Trader		38	6(15.8)	
All others		38	4(10.5)	
Current marital status				
Unmarried		89	21(23.6)	P>0.05
Married		234	48(20.5)	
Ethnicity				
Amhara		135	37(27.4)	
Gamo		101	16(15.8)	
Wollayta		28	3(10.7)	P>0.05
Oromo		26	8(30.8)	
Others		33	5(15.2)	
Religion				
Orthodox Christians		286	62(21.7)	
Other Christians		20	2(10.0)	P>0.10
Muslims		17	5(29.4)	

Note: Total condom users = 69(21.4%)

condom users and non-users were statistically significant for age, education, and occupation ($P<0.0001$ for all three), but not for marital status($P>0.05$), ethnicity($P>0.05$) or religion ($P>0.10$). Table 5 presents the prevalence rate of condom use in relation to self-reported high-risk sexual practices. Significantly higher rates of condom use were found in those who reported high-risk sexual practices than in those who didn't, except for extramarital sex and sex with prostitutes in the previous three months.

Reasons given for never having used condoms or for having used them inconsistently are shown in Table 6. Almost half (43.3%) of those who had never used condoms stated they didn't know what condoms were.

More than three quarters (76.8%) of those who reported condom use at least once, obtained them from health institutions (Arba Minch Health Center and Schecha Clinic), while the rest mentioned friends or pharmacies as their sources.

KNOWLEDGE

AIDS

The majority (331 or 93.8%) of the 353 participants stated that they had heard about AIDS, while 22(6.2%) said they had never heard of AIDS. Asked to express their understanding of what AIDS is, 107(32.3%) of the 331 respondents who had heard about AIDS thought it was a devastating and killing communicable disease, 92(27.8%) said it was a severe and hopeless disease, 59(17.8%) a disease which weakens natural immunity and/or which has no

Table 5. Prevalence rate of condom use ever in relation to self-reported high-risk sexual practices among 323 sexually-experienced respondents

Practice (Number reporting)	Condom Users NO.	%	Odds ratio	95% Confidence Interval	P-Value
Sex with several partners (PTM)					
Yes (71)	23	(32.4)	2.15	1.20 - 3.90	<0.05
No (252)	46	(18.3)			
Extramarital sex (PTM)					
Yes (34)	10	(29.4)	1.76	0.78 - 4.00	>0.10
No (199)	38	(19.1)			
Sex with prostitutes ever					
Yes (137)	43	(31.4)	2.82	1.63 - 4.90	<0.001
No (186)	26	(14.0)			
Sex with prostitutes (PTM)					
Yes (36)	12	(33.3)	2.02	0.96 - 4.30	>0.05
No (286)*	57	(19.9)			
One or more risk factors					
Yes (158)	51	(32.3)	3.89	2.15 - 7.03	<0.001
No**(165)	18	(10.9)			
Two or more risk factors					
Yes (70)	24	(34.3)	4.26	2.13 - 8.54	<0.001
No**(165)	18	(10.9)			

PTM - Previous three months
* - One sexually-experienced individual declined to answer this question
** - No, denying all risk factors asked

Table 6. Reasons for never having used condoms or for using them inconsistently, given by 254 and 38 sexually-experienced respondents, respectively

Reason	Number	Percentage
Non - Use Ever	N = 254	
Don't know what condoms are	110	43.3
Have sex with only one partner	34	13.4
Feel ashamed to obtain condoms	18	7.1
Limited partners or no sex with prostitutes	15	5.9
Religious barrier	14	5.5
Reduces sexual gratification or don't like	20	7.9
Don't know where to obtain condoms	12	4.7
Condoms are expensive	8	3.1
Wife uses other contraceptives	6	2.4
Condoms are useless	6	2.4
Cannot get condoms easily	4	1.6
Other*	7	2.8
Inconsistent Use	N = 38	
Don't always have condoms at hand	7	18.4
Reduces sexual gratification	6	15.8
Use them only when uncertain of partners' health	6	15.8
Don't always remember to use them	5	13.2
Have sex infrequently	5	13.2
Have sex with only one partner	4	10.5
Condoms are expensive	3	7.9
Wife uses other contraceptives	2	5.3

* Others include, partner would suspect me of having STDs (3)
I have sex only with healthy persons (2)
I do not have disease (1), and
I never thought about it previously (1)

treatment to date, 45(13.6%) said it was a devastating and killing STD, 19(5.7%) thought it was just a disease, 5(1.5%) thought it was a disease which comes by shaking hands, and 4(1.2%) said they didn't know. More than three-quarters(76.2%) of 328 respondents believed that AIDS can make a person sick, and 97.9% of 329 respondents believed that it is fatal. A majority of 330 respondents (318 or 96.4%) believed both men and women could get AIDS, while 7(2.1%) believed that only women could get AIDS, one person said neither, and 4 respondents didn't know. Nearly 95% (310 of 328 respondents) agreed that AIDS has no cure at present, while 5% believed that it could be cured if a doctor were visited earlier or by unspecified medications.

Table 7 shows the modes of transmission and prevention of AIDS mentioned by 328 respondents. A majority of respondents were able to mention at least one correct mode of transmission (94.8%) and at least one correct mode of prevention(86.0%), as compared to 5.2% and 14.0% who couldn't come up with any correct mode of transmission or prevention, respectively.

In response to eight questions about the transmission of AIDS, the majority of respondents(97.6-99.4%) answered questions relating to sexual transmission correctly (Table 8). However, a smaller

Table 7. Modes of transmission and prevention of AIDS mentioned by 328 respondents who had heard about AIDS*

Mode of Transmission	No. Reporting	** Percentage
Sexual intercourse with infected person	181	55.2
Sex with prostitutes and/or several partners	130	39.6
Traditional treatment with contaminated instruments	55	16.8
Transfusion with infected blood	33	10.1
Social kissing and shaking hands	13	4.0
From infected mother to fetus	8	2.4
Failure to use condom during sexual intercourse	5	1.5
Don't know	4	1.2
Mode of Prevention		
Sex only with wife or one partner	287	87.5
Abstain from sex with prostitutes	65	19.8
Use condoms during intercourse	45	13.7
Avoid traditional treatment or blood transfusion	41	12.5
Avoid shaking hands or sharing toilet with patients	16	4.9
Avoid any public gathering	14	4.3
Follow instructions of health professionals	13	4.0
Don't know	3	0.9

* Modes of transmission and prevention were given in response to open-ended questions

** Respondents can give more than one answer, so percentages add up to more than 100%.

proportion(61.2-78.2%) were able to answer questions about non-sexual transmission of AIDS correctly.

Of the 353 participants, 93.0% and 88.3%,respectively, stated that there are health risks associated with sexual contact with prostitutes and with extramarital sex. In contrast, 4.5% said no and 2.5% didn't know of health risks of sex with prostitutes as compared to 7.7% and 4.0% for extramarital sex, respectively.

Condoms

A total of 238(67.4%) of the 353 participants said they had heard of the word condom.

Among 330 respondents who had heard about AIDS, 189(57.3%) were aware of the fact that condom use can protect against AIDS while 33(10.0%) said that it doesn't protect, and the remaining 108(32.7%) didn't know(Table 8).

Table 9 shows the prevalence rates of knowledge about the role of condoms in AIDS prevention in relation to socio-demographic variables. There were significant differences in knowledge about condoms by age, education, occupation ($P<0.001$), marital status, and ethnicity ($P<0.01$), but not by religion ($P>0.10$).

Of the 238 respondents who had heard of condoms, 236 answered a question about the uses of condoms. Of those, 168(71.2%) mentioned their use in pregnancy prevention, 208(88.1%) in STD prevention, and 120(50.8%) in AIDS prevention. Eighty six percent were aware that the same condom should only be used once and then disposed of, while the rest didn't know. More than two-

Table 8. Frequency and percentage of correct answers given to questions on AIDS by 330 respondents who had heard of AIDS

Question	A N S W E R S		
	Correct N(%)	Incorrect N(%)	Don't know N(%)
Can AIDS be passed from male to female ?	323(97.9)	4(1.2)	3(0.9)
Can AIDS be passed from female to male ?	328(99.4)	1(0.3)	1(0.3)
Can AIDS be passed from prostitutes to clients ?	327(99.1)	1(0.3)	2(0.6)
Can AIDS be passed through sexual intercourse ?	322(97.6)	3(0.9)	5(1.5)
Can AIDS be passed through injections ?	258(78.2)	25(7.6)	47(14.2)
Can AIDS be passed through social kissing?	202(61.2)	79(23.9)	49(14.8)
Can AIDS be passed through drinking dirty water ?	244(73.9)	36(10.9)	50(15.2)
Can AIDS be passed through shaking hands ?	222(67.3)	65(19.7)	43(13.0)
Can AIDS be prevented by using condom ?	189(57.3)	33(10.0)	108(32.7)

Table 9. Prevalence rates of knowledge of role of condoms in AIDS prevention in relation to socio-demographic characteristics in 353 respondents

Characteristic	Total Respondents	Know that condom protects against AIDS	
Age			
(Years) 15 - 19	51	32(62.7)	
20 - 29	98	64(65.3)	P<0.001
30 - 39	133	69(51.9)	
40 - 49	71	24(33.8)	
Education			
Illiterate/No formal education	33	5(15.1)	
Grade 1 - 6	91	17(18.7)	P<0.001
7 - 12	173	115(66.5)	
12 +	56	52(92.8)	
Occupation			
Unemployed/daily labourer	64	21(32.8)	
Student	45	32(71.1)	
Government employee			
Administrative	45	28(62.2)	
Technical	98	74(75.5)	P<0.001
Others	25	9(36.0)	
Merchant/Trader	38	14(36.8)	
All others	38	11(29.0)	
Current marital status			
Unmarried	119	79(66.4)	
Married	234	110(47.0)	P<0.01
Ethnicity			
Amhara	141	85(60.3)	
Gamo	115	49(42.6)	
Wollayta	32	12(37.5)	P<0.01
Oromo	30	21(70.0)	
Others	35	22(62.9)	
Religion			
Orthodox Christians	305	162(53.1)	
Other Christians	31	17(54.8)	P>0.10
Muslims	17	10(58.8)	

thirds(71.2%) knew that one can obtain condoms from health institutions, and another 23.7% mentioned combinations of sources of condom supply.

Sources of Information About AIDS and Condoms

Table 10 shows the sources of information about AIDS and about condoms, respectively, mentioned by respondents. About two-thirds (65.2%) of the respondents who had heard about AIDS mentioned two or more sources of information, as did 46.6% of those who had heard about condoms. Mass media (radio/ television/newspapers/magazines) constituted the most important source of information about AIDS, while health institutions were a more important source of information about condoms.

Knowledge versus Practice

The relationship between knowledge about the role of condoms in AIDS prevention versus actual condom use among the 300 sexually-experienced respondents who knew about AIDS is shown in Table 11. The association between knowledge and practice was statistically significant.

Table 11. Relationship between knowledge of role of condoms in AIDS prevention and use of condoms, among 300 sexually-experienced respondents who had heard of AIDS

Condom Use (Number reporting)	Know condom protects against AIDS Yes(%)	No(%)	Chi-Square Value
1. Always*(31)	28(90.3)	3(9.7)	2.33
2. Sometimes(38)	29(76.3)	9(23.7)	16.04
3. Never (231)	121(52.4)	110(47.6)	7.94

* With the partners with whom they normally employed condoms

Comparisons	Odds Ratio	95% confidence interval	P-Value
1 - 2	2.90	0.71 - 11.83	P>0.10
1 - 3	8.48	2.50 - 28.80	P<0.001
2 - 3	2.93	1.33 - 6.50	P<0.05

ATTITUDES

Premarital Sex

Out of 352 respondents, 40.6% were against premarital sex for males and 66.2% were against it for females. The most frequent reasons given for favouring premarital sex for either sex included, "if they were mature enough", " sex is a necessity", "sex is a natural phenomenon", and "they should get the experience". Of those who were against premarital sex for males, 53.1% said that it carried the risk of STDs and/or unplanned pregnancies, and 10.9% each, respectively, said that it was forbidden by religion and/or culture and that it led to continued promiscuity even after marriage. The remaining 25.2% gave other reasons. The majority (45.9%) who were against premarital sex for females, emphasized that females should protect and maintain their virginity till marriage, while 37.8% gave the prevention of unwanted pregnancy and/or STDs as their reasons, and the remaining 16.3% gave other reasons.

Table 12. Self-reported high-risk sexual practices and perceived risk for HIV infection among 300 sexually-experienced respondents who had heard of AIDS

Risk Practice (Number reporting)	Perception of Risk	
	Yes (%)	No (%)
1. Two or more in the previous three months or before (64)	42 (65.6)	22 (34.4)
2. One or more in the previous three months or before (144)	89 (61.8)	55 (38.2)
3. None reported (156)*	75 (48.1)	81 (51.9)

Comparisons	Odds Ratio	95% Confidence interval	P-Value
1 - 2	1.18	0.61 - 2.29	>0.10
1 - 3	2.06	1.08 - 3.95	<0.05
2 - 3	1.75	1.07 - 2.84	<0.05

* - This category could include men who had practiced extramarital sex or sex with multiple partners prior to the previous three months, since these questions were not asked.

Table 13. Changes in sexual behaviour since hearing about AIDS and reasons for not changing, given by 225 and 104 respondents aware of AIDS and who had or had not reported changing, respectively.

Reported changes in sexual behaviour	N	%
	N = 225	
Stay with one sexual partner	129	57.3
Reduce number of sexual partners or avoid sex with prostitutes	53	23.6
Use condoms and/or decrease number of partners	23	10.2
Abstain from sex	20	8.9
Reasons for not changing sexual behaviour	N = 104	
Have only one partner	38	36.5
Have never had sex with a prostitute	25	24.0
Have never had sex	22	21.2
Do not suspect being infected	11	10.6
Don't care about AIDS	8	7.7

Table 14. Self-reported changes in sexual behaviour in relation to self-reported high-risk sexual practices among 300 sexually-experienced respondents who had heard of AIDS

Risk Practice (Number Reporting)	Change in Sexual Behaviour Yes (%)	No (%)	Chi square Value
1.Two or more in the previous three months or before (64)	50 (78.1)	14 (21.9)	0.02
2.One or more in the previous three months or before(144)	112 (77.8)	32 (22.2)	2.84
3.None reported(156)*	104 (66.7)	52 (33.3)	4.59

Comparisons	Odds Ratio	95% confidence interval	P - Value
1 - 2	1.02	0.48 - 2.21	>0.10
1 - 3	1.79	0.86 - 3.74	>0.05
2 - 3	1.75	1.01 - 3.03	<0.05

* - This category could include men who had practiced extramarital sex or sex with multiple partners prior to the previous three months, since these questions were not asked.

DISCUSSION

GENERALIZABILITY

In this study, the care taken in enroling respondents and in obtaining responses is believed to have contributed to the relatively high response rate. A response rate of 81%, and the fact that the refusal rate was only 3.8%, suggest that the representativeness of the sample can be considered to be satisfactory.

Even though validation of responses could not be attempted because of the need to maintain the anonymity of the respondents, careful interpretation of the data and cautious generalization to the male population of the town and possibly also to the male populations of other comparable urban centers of Ethiopia, could still be made.

PRACTICES

The findings of this study revealed that high-risk sexual practices are common among sexually-active male urban residents in Arba Minch town.

High-risk factors associated with heterosexual transmission of HIV infection are sex with multiple partners, sex with prostitutes, and history of or concurrent sexually transmitted diseases. Of the 324 sexually-experienced participants, 22.0% had engaged in sex with several partners in the three months preceding the study and 42.3% had experienced sex with prostitutes, including 11.1% in the previous three months. Extramarital sex is relevant

to the AIDS epidemic because of the importance of multiple partners in predicting level of risk, and the potential danger of infection it may carry to a monogamous partner. Among currently married men in this study, 14.5% had had sex with one or more extramarital partners in the past three months, including 7.7% who had had sex with prostitutes, which indicates a high likelihood for the spread of HIV infection within the general population of the town. Moreover, 38.6% of the sexually-experienced respondents had had at least one episode of STD sometime in the past.

These findings indicate high prevalence rates of unsafe sexual practices, comparable to those of other studies conducted elsewhere in Africa. For example, in a study of 722 male heads of households in Zimbabwe, 31.2% of men reported one or more extramarital sexual partners in the previous year, and 33.0% reported having contracted one or more STDs during the previous five years (19). In the study conducted in Jimma, Ethiopia, more than ten percent of 489 men had one or more sexual partners in the previous month, and 47.2% of the respondents reported sex with one or more prostitutes, including 18% in the past month. Furthermore, 33.1% of the respondents reported having contracted one or more STDs in the past (11). Similar results were found in a study of high school students in Zimbabwe (40). In another study of 2753 male teacher-trainees in the same country, 38.5% participants reported having had sex with prostitutes (42), while 24.7% of 173 working-class men from Bulawayo, Zimbabwe (43) did the same.

Anal sex and homosexual intercourse are high-risk activities

for HIV transmission, but are reportedly rare in many parts of Africa (11,29). The findings of this study are consistent with this, as less than one percent of the respondents reported having experienced anal sex, and none acknowledged homosexual contact.

Geographical separation between married men and their wives may play an important role as a determinant of high-risk sexual practices, though it was not investigated in this study.

The correct and consistent use of condoms during sexual intercourse is a relatively cheap and effective method of protecting oneself from HIV infection. The findings of this study indicate that the prevalence of condom use is low, with 21.4% of sexually-experienced participants reporting having used condoms at least once, and 9.6% having used them always with the partners with whom they normally employed condoms.Although 28 (54.9%) of those aged between 15 and 19 years were sexually-experienced, including 3 (5.9%) with prostitutes, only one (2.0%) reported ever having used condoms.

A review of studies conducted elsewhere in Africa revealed that in most places the reported prevalence rate of condom use for contraceptive purposes was very low, usually less than 1% among married couples (18). The study among male residents of Jimma town, Ethiopia, revealed rates of 8% consistent use and 17% occasional condom use among those who reported having had sex with prostitutes in the past month (11). Of the 722 Zimbabwean male heads of household, 35.7% had used condoms previously and 5.3% said they were currently using condoms (19). In a study conducted in Haitian

residents of Montreal, only 11.7% of 240 sexually-experienced males used condoms either often or always (15).

Significantly higher rates of condom use were reported by those who reported one or more high-risk sexual practices than those who didn't, as shown in Table 5. This suggests that there is already a certain level of awareness in the study population about AIDS and/or STDs, and about the need for protective measures. However, among the currently married respondents in this study, condom use was not significantly different between those who reported and those who denied extramarital sex in the previous three months. This might be explained by the possibility that some of those who denied extramarital sex in the previous three months had experienced it prior to that, thus resulting in a dilution of the association.

KNOWLEDGE

Knowledge of the role of condoms in AIDS prevention was low in this study population, with only 53.5% being aware that condoms could protect against HIV infection. This is comparable to the findings in the Jimma study of 49.6% of male residents being aware of the protective role of condoms (11). High school students in Zimbabwe were better informed, with 75.1% of them knowing about the protective role of condoms (40). In this study, although 189 respondents knew about the protective role of condoms when asked specifically about it, only 45 came on their own with condom use as a preventive measure in response to an open-ended question,

indicating that even if they knew about the use of condoms in AIDS prevention, that knowledge was not at the forefront of their minds. Almost half (43.5%) of sexually-experienced respondents who had never used condoms didn't know what condoms were. This suggests that making information about condoms more widely available may lead to an increase in their use. In contrast, a significantly lower proportion of non-users among Zimbabwean male heads of household (25.2%) didn't know what condoms were (19).

Based on the findings of various studies, it has been emphasized that the objectives of an educational intervention should mainly focus on changing individuals' attitudes and ultimately behaviours, rather than only imparting knowledge(13). Knowledge about AIDS in general is important and is a very cheap method available worldwide for the prevention of HIV infection. However, several studies have revealed that knowledge alone was not sufficient to lead to a change of behaviour(11,12). In the Jimma study, high knowledge about AIDS was significantly associated with higher risk scores (11). In this study, 97.6% to 99.1% of those who had heard about AIDS knew about the sexual transmission of AIDS from person to person and from prostitutes to their clients, respectively, and yet a large proportion of them engaged in sex with multiple partners, including prostitutes. However, a strong and significant association was found between condom use and knowledge about the role of condoms in AIDS prevention (Table 11). These results indicate that knowledge is still a very essential requirement in its contribution to the adoption of safer behaviour

although the effect of possible confounders should be taken into account.

In this study, from 10.9% to 23.9% of respondents wrongly believed that HIV could be transmitted through shaking hands, drinking dirty water,or social kissing, indicating that their knowledge about AIDS was incomplete. Still, these findings indicate a lower prevalence of false beliefs than elsewhere in Africa. For example, in Zimbabwe, 63.8% of the participants in the high school study believed that HIV could be transmitted through kissing (40). In the Jimma study, 82% agreed with the statement that HIV transmission occurs through kissing, 69% by shaking hands, and 54.1% through drinking dirty water (11). The difference between this study and the Jimma study, which was conducted two years prior, could reflect progress in the national AIDS education efforts, or differences in socio-demographic characteristics, although those differences were not striking.

Table 10 shows that the mass media (radio /TV/ newspapers/ magazines) play a predominant role in conveying information about AIDS, but are relatively less successful in doing so about condoms. This is also indicated by the larger proportion of study participants who have heard about AIDS than about condoms (93.8% versus 67.4%, respectively). Although 12.7% of all study participants were students, only 5.9% reported having heard about condoms in the classroom, and none had heard there about AIDS. This suggests that educational institutions are under-utilized as a means of conveying information about AIDS and condoms.

ATTITUDES

A person's attitude towards a specific behaviour has its own influence on whether this person adopts the behaviour or, if he has already adopted it, whether he is likely or not to modify or completely change it. The majority of the participants were against premarital sex for females, although only 37.8% of them related their opposition to health reasons. On the other hand, the majority of the respondents were in favour of premarital sex for males. This finding may be interpreted as an indirect indicator of the respondents' positive attitudes towards having sex with multiple partners, which may probably include married women and/or prostitutes, even though the vast majority of respondents did acknowledge health risks in having sex with prostitutes and extramarital sex.

One of the factors which can lead to a change in peoples' behaviour is thought to be the level at which they consider themselves at risk for HIV infection (13). A study carried out among Danish men showed that a significantly higher proportion of men who reported risk factors perceived self-risk for HIV infection and changed their sexual practices than those who did not report risk factors (41). However, in real terms, it was only less than half of those who perceived self-risk who also reported to have changed their behaviour. In contrast, in this study, 53.0% of respondents overall perceived themselves at risk and of these more than 80.0% reported having changed their behaviour. As in the

Danish study, a significant difference in perception of self-risk as well as in change of behaviour was observed between those who reported and those who did not report high-risk sexual practices. Only 5.0% of sexually-experienced respondents said they had considered or started to use condoms, a finding which is consistent with that of the Zimbabwe study, in which 5.3% of respondents had done so (19). In contrast, 33% of those who reported change in the Danish study said they often used condoms, as compared to 7.1% in this study.

PROSPECTS FOR INTERVENTION

The current prevalence of HIV infection among the male population of Arba Minch is not known, and the only indication of the existence of the infection in the town is the 8.2% seropositivity among prostitutes in 1989 (17). However, the fact that 38.6%% of the participants reported having had sex with prostitutes and that few of them have used condoms, indicates that HIV infection is probably spreading fast among the general population.

The findings of this study indicate that there is good potential for improvement in condom use. Almost half of condom non-users did not know what condoms were, indicating that education may be helpful. Only a low proportion of sexually-experienced non-users (5.5%) mentioned religious obstacles as their reason for not using condoms, which is comparable to the Zimbabwe study, for which the corresponding figure was 2.2% of condom non-users (19). Cultural

obstacles to condom use also appear to be low in this study, as only 7.1% of condom non-users mentioned feeling ashamed to obtain condoms. This suggests that barriers are related more to inadequate information or lack of knowledge than to religious or cultural factors, which are more difficult to combat. Higher use rates were found among those who practiced risk behaviours. Finally, condom use was strongly associated with knowledge about the role of condoms in AIDS prevention. It has been suggested, however, that a major increase in the use of condoms requires not only a greater awareness about condoms and their importance in preventing disease transmission, but also increased motivation to use them, and an adequate distribution system to get them to the individuals at risk of transmitting or acquiring HIV infection.

These findings, in addition to those from other studies that revealed the possibilities of inducing considerable changes in risk behaviours in those at high risk (13), reveal that there is still a considerable place for educational interventions against the spread of HIV in the population. Nevertheless, the availability and accessibility of the necessary supplies required for the new behaviour, in this case the use of condoms, is equally essential if people are expected to adopt new behaviours through educational campaigns. Condoms are supplied free of charge to those who request them at the three health institutions in Arba Minch town, although shortages are not uncommon. Therefore, efforts should be made to increase both the availability of condoms in stock, and the number of distribution/sale outlets (e.g. pharmacies, shops, bars, hotels)

3- The mass media appear to have been less effective in imparting information about the role of condoms in AIDS prevention than educating about AIDS. This must be corrected.

4- Although progress appears to have been made on this line, educational messages about AIDS should be monitored to ensure they also provide information on ways which are not routes for HIV transmission.

5- Since self-perception of risk appears to be important in changing one's behaviour, ways of promoting awareness of self-risk should be explored and incorporated into educational interventions.

Although not directly emerging from the findings of this study, the following would also appear to be important:

1- To diversify and strengthen the various channels ofinformation such as health institutions, government and mass organizations, and religious organizations.

2- To ensure and increase the availability of condoms in each of the established supply sites, and to increase the number of distribution/sale outlets.

3- To monitor and evaluate the effects of the proposed educational interventions and assess the effectiveness of the contributions of all of the above.

REFERENCES

1. **Gottlieb, MS, Schroff, R, Schanker, HM, Weisman, JD, Fan, PT, Wolf,** RA, Saxon, A.1981. Pneumocystis carinii pneumonia and mucosal candidiasis in previously healthy homosexual men - evidence for a new acquired cellular immunodeficiency.New Engl. J. Med. 305, 1425-1431.
2. Mann, JM, and Chin, J.1988. AIDS: a Global perspective. New Engl. J. Med. 319, 302-303.
3. Quinn, TC, Mann, JM, Curran, JW, and Piot, P.1986. AIDS in Africa: an epidemiological paradigm. Science 234, 955-963.
4. Kreiss, JK, Koech, D, Plummer, FA, Holmes, KK, Lightfoot, M, Piot, P, Ronald, AR, Ndinya-Achola, JO, D'Costa, LJ, Roberts, P, Ngugi, EN, Quinn, TC.1986.AIDS virus infection in Nairobi prostitutes. New Engl. J. Med. 314, 414-418.
5. Piot, P, Quinn, TC, Taelman, H, Feinsod, FM, Minlangu, KB, Wobin, O, Mbendi, N, Mazebo, P, Ndangi, K, Stevens, W, Kalambayi, K, Mitchell, S, Bridts, C, and McCormick, JB.1984. Acquired immunodeficiency syndrome in a heterosexual population in Zaire. Lancet 2, 65-69.
6. Piot, P, Plummer, FA, Mhalu, FS, Lamboray, J, Chin, J, and Mann, JM.1988.AIDS: An international perspective. Science 239, 573-579.
7. Hudson, CP, Hennis, AJM, Lloyd, G, Kataaha, P, Moore, AT, Sutehall, GM, Whetstone, R, Wreghitt, T, and Karpas, A.1988. Risk factors for the spread of AIDS in rural Africa: evidence from a comparative seroepidemiological survey of AIDS, hepatitis B and syphilis in southwestern Uganda. AIDS 2, 255-260.
8. Schoepf, BG, Nkara, R, Schoepf, C, Engunda, W, and Ntsomo,P. 1988. AIDS and society in central Africa: a view from Zaire, in AIDS in Africa: The Social and Policy Impact (eds N Miller and RC Rockwell.) Edwin Mellen, Lewiston.
9. Brown, KW.1989. AIDS in Africa. Psychology 204-734, 2-24.
10. Svenson, LW, and Varnhagen, CK.1990. Knowledge, attitudes and behaviours related to AIDS among first-year university students. Can. J. Publ. Hlth.81, 139-140.
11. Larson, CP, Assefa, M, Aboud, FE, and Sheferaw, T. Risk behaviours for HIV infection: their occurrence and determinants in Jimma town, southwestern Ethiopia. Eth. Med. J.(in press).
12. Kegeles, SM, Adler, NW, and Irwin, CE.1988. Sexually active adolescents and condoms:changes over one year in knowledge, attitudes and use. Am. J. Publ. Hlth. 78,460-461.
13. Becker, MH, and Joseph, JG.1988. AIDS and behavioural change to reduce risk:a review. Am. J. Publ. Hlth. 78, 394-410.
14. Clumeck, N, Van de Perre, P, Carael, M, Rouvroy, D, and Nzaramba, D.1985. Heterosexual promiscuity among African patients with AIDS[letter]. New Engl. J. Med.313, 182.
15. Adrien, A, Boivin, J, Tousignant, Y, and Hankins, C.1990. Knowledge, attitudes, beliefs and practices related to AIDS among Montreal residents of Haitian origin. Can. J. Publ. Hlth. 81, 129-134.

16. Udvardy, M.1988. Social and cultural dimensions for research on sexual behaviour. Society and HIV/AIDS. Selected knowledge base for research and action. P.55.
17. Dr. Mengistu, M. AIDS Control Programme, Epidemiology Division. Personal communication.
18. Goldberg, HI, Lee, NC, Oberle, MW, and Peterson, HB. 1989 Knowledge about condoms and their use in less developed countries during a period of rising AIDS prevalence. Bull. Wld. Hlth. Org.67, 85-91.
19. Mbizvo, MT, and Adamchak, DJ.1989. Condom use and acceptance: a survey of male Zimbabweans. Cent. Afr. J. of Med.35, 519-523.
20. AIDS Control Programme, Ethiopia.1989. Background information on AIDS. Educational kit, Ministry of Health, Ethiopia.
21. World Health Organization.1990. Acquired Immunodeficiency Syndrome. Data as of 31 December 1989. Wkly. Epidem. Rec.65, 1-4.
22. World Health Organization.1990. Acquired Immunodeficiency Syndrome. Data as of 31 October 1990. Wkly. Epidem. Rec.65, 337-344.
23. World Health Organization.1990. Acquired Immunodeficiency Syndrome. Data as of 31 May 1990. Wkly. Epidem. Rec.65, 165-172.
24. Johnson, AM, and Laga, M.1988. Heterosexual transmission of HIV. AIDS 2, s49-s56.
25. Ngaly, B, and Ryder, RW.1988. Epidemiology of HIV infection in Africa. J. Acquir. Immune Defic. Syndr.1, 551-558.
26. Biggar, RJ.1986. The AIDS problem in Africa. Lancet 2, 79-82.
27. Brunet, JB, and Ancelle, RA.1985. The international occurrence of the acquired immunodeficiency syndrome. Ann. Int. Med.103, 670-674.
28. Mann, JM, Francis, H, Davachi, F, Quinn, TC, N'Galy, B, Piot, P, Asila, PK, Baudoux, P, Nzilambi, N, Colebunders, RL, Kabote, N, Malonga, M, and Curran, JW.1986.Risk factors for human immunodeficiency virus seropositivity among children 1-24 months in Kinshasa, Zaire. Lancet 2, 654-657.
29. Pela, OA, and Platt, JJ.1989.AIDS in Africa:emerging trends. Soc. Sci. Med.28, 1-8.
30. Hunt, CW.1989. Migrant labour and sexually transmitted disease: AIDS in Africa. J. Hlth. Beh. 30, 353-373.
31. Berkley, SF, Widy-Wirski, R, Okware, SI, Downing, R, Linnan, MJ, White, KE, and Sempala, S.1989.Risk factors associated with HIV infection in Uganda. J. Inf. Dis.160, 22-30.
32. Carswell, JW, Lloyd, G, and Howells, J.1989.Prevalence of HIV-1 in east African lorry drivers. AIDS 3, 759-761.
33. World Health Organization. 1988. AIDS Prevention and Control. Pergamon Press, Oxford.
34. Sewankambo, NK, Carswell, JW, Mugerwa, RD, Lloyd, G, Kataaha, P, Downing, RG, Lucas, S.1987. HIV infection through normal heterosexual contact in Uganda. AIDS 1, 113-116.
35. Population Reports.1986. Using condoms to prevent AIDS.14.

Appendix 1a

CONSENT FORM (English translation)

Thank you for allowing us to share your precious time for a brief discussion about a study to be conducted in Arba Minch town.

This study will be conducted in a total of 576 randomly selected households from all six kebeles found in the town. Only one person who fulfils the criteria for inclusion into the study has been selected randomly (by chance) from each household to participate in the study. Based on this, you were selected from this household to participate in the study. You were selected for the study strictly by chance (as you have seen it yourself), and by no other means.

This study will be conducted through interviews. The interview shall take place on the date and at the time and place you choose, at your own convenience. The study will involve various intimate and private life questions. These questions need a private setting in which only you and an interviewer will carry out the interview. We would like to assure you that this privacy, shall strictly be secured throughout the process of the interview, that the results of the interview and the study shall be kept strictly confidential, and that your name shall never be mentioned in relation to the study, either now or in the future. You have a full right to participate throughout, to discontinue at any time you feel like doing so, or never to participate in the study.

Are you willing to participate in the study? Yes _____

No _____

የፍ ቃደኝነት ማረጋገጫ መግለጫ

በአርባ ምንጭ ከተማ ጨበጥ ስለሚካሄደው አንድ ጥናት ቢካፈሉ ለመወያየት ውድ ጊዜያችን እንድንጋራ ስለፈቀዱልን እናመሰግናለን::

ይህ ጥናት በከተማው ጨበጥ ከሚገኙት ከ[illegible] ተብለያት ጥበጥ በዕጣ የተመረጡ በጠቅላላ አምስት መቶ ሰባ ስድስት /576/ የመኖሪያ ቤቶች ጥናት ይካሄዳል:: ከእያንዳንዱ ቤት በጥናቱ ውስጥ ለመሳተፍ የሚ ያስቸሉትን መመዘኛዎች የሚያሟሉ አንድ ሰው ብቻ በዕጣ /በዕድል/ ጥናቱ ጥበጥ እንዲሳተፍ ይመረጣል:: በዚህ መሠረት ከዚህ ቤት እርስዎ በጥናቱ ጥበጥ እንዲሳተፉ ተመርጠዋል:: እርስዎ ለጥናቱ የተረጡት ፍፁም በዕድል /እርስዎ ራስዎ እንደተመለከቱት/ ነው እንጂ በምንም ሌላ መንገድ አይደለም::

ይህ ጥናት የሚካሄደው በቃለ መጠይቅ አማካኝነት ነው:: ቃለ መጠይቁ እርስዎ ያመቸዎ በለው በመረጡት ቦታ ፣ በቤትና ቦታ ይካሄዳል:: ጥናቱ የተለያዩ ጥያቄዎችና የግል ህይወትን የሚመለከቱ ጥያቄዎችን ይይዛል:: እነዚህ ጥያቄዎች እርስዎና አንድ ቃለ መጠይቅ አቅራቢ ብቻ ሆናችሁ ቃለ መጠይቁን ስታካሂዱበት ሰፈር ያለ /ሌላ ሰው/ አካባቢን መኖር ይቻላል::

የበታው ሰዋራነት በቃለ መጠይቁ ወቅት በሙሉ በጽሁፍ እንደምትጠበቅ ፣ የቃለ መጠይቁና የጥናቱ ውጤት ፍፁም ሚስጥር ሆኖ ተጠብቆ እንደሚቆይ ፣ እና የእርስዎም ስም አሁንም ሆነ ወደፊት ከጥናቱ ጋር ሊተያያዝ /ሊተዛመድ/ መሆኑን ፈፅሞ እንደማይጠቀስ ልናረጋግጥልዎ እንወዳለን:: በጥናቱ ጥበጥ ሙሉ በሙሉ የመሳተፍ ፣ ጥያቄ ለመመለስ በፈለጉበት ሰዓት የማቋረጥ ፣ ወይም ፈፅሞ ያለመሳተፍ ሙሉ መብት አለዎት::

በጥናቱ ጥበጥ ለመሳተፍ ፍቃደኛ ነዎትን ? አዎን ______________

የለም ______________

Appendix 2

Questionnaire

Date _____ Respondent's ID _____
Kebele _____ Household ID _____

Age _____ Years

Education (Circle one)
0 Can't read or write
1 Read only
2 Read and write but no formal education
3 Last grade completed _____

Occupation (Circle one)
0 Unemployed
1 Daily labourer
2 Student
3 Government employee (Specify position) _____
4 Merchant (Specify type) _____
5 Bus or truck driver
6 Others (Specify)

Marital Status (Circle one)
0 Never married
1 Married
2 Divorced or separated
3 Widowed

Ethnicity (Circle one)
0 Gamo
1 Wollayta
2 Amhara
3 Konso
4 Others (Specify)

Religion (Circle one)
0 Ethiopian Orthodox Christian
1 Other Christian (Specify) _____
2 Muslim
3 Others (Specify) _____

Note:- Read instructions to the respondent and give him the answer sheet; check whether the respondent has marked his answers as he was told after asking him the first three questions and instruct him again if he has not done it correctly.

Instructions

First of all we thank you very much for your having come to this interview as a volunteer to participate in this study. We hope that your cooperation will continue during the interview.

Now we are ready to start our interview. Most of the questions are about your personal life and are not usually told to others. Some of the questions are about yourself while others are not. The result of this study is based on the completeness and truthfulness of the answers given by you and other participants like you. Since they have a great contribution to the study we hope that your answers will be complete and true. To encourage your honesty we will allow you to record your answers by your own on an answer sheet where your name will not be written, and to return it sealed in an envelope which will be provided to you.

This study is fully confidential and many persons like you will participate in it. The name of a participant is not at all needed for the study either now or in the future, and will not be mentioned anywhere. In order to keep the confidentiality and to encourage your honesty, you are given this answer sheet and envelope on which your name should not be written.

I (the interviewer) will read the questions one by one and you will record your answers in the correct place on the answer sheet without telling them to me. Please ask me to re-read any question that you have not understood. When you finish recording your answers completely, seal the answer sheet within the envelope without showing it to me, and finally give it back to me.

For a question you are asked circle the "\/ " sign which is found on the left side of the answer sheet if your answer is a "Yes" answer. If your answer is a "No" answer circle the "X" sign which is on the right side of the answer sheet. A question which reads "With how many persons?" will be read following questions number 2,3,4, and 5. If you say yes to these questions, record your answers by writing a "1" as many as the number of persons (show him using an example).

In order to make sure that you have correctly understood how to record your answers, I will ask you the following three questions and then check the answers you have recorded. Have you understood every thing that I told you till now? If the response is a "Yes" one, read these three questions to the respondent one by one slowly.

a. Did you sleep enough last night ?
b. Did you have your breakfast this morning ?
c. Are you feeling comfortable now ?

Note:- Read the instructions carefully and slowly to the

respondent before proceeding with the next questions.

Instructions

The following eight (8) questions are completely concerned about your personal life. Some of the questions may make you angry or may disappoint you. But since they are very important for the study we ask your excuse for asking you such questions. For the success of this study we ask you to give us true answers.
You have a full right to give or not to give answers to these questions.

Are you willing to give your answers to these questions honestly ?

If the answer is "Yes" continue with the interview; If no, stop the interview.

N.B.:- If the respondent is never married begin with question 1 and omit question 3. If the respondent is married, widowed, divorced, or separated, begin with question 2.

1. Have you ever experienced sexual intercourse? 0 No 1 Yes
2. Have you had sex in the past three months? 0 No 1 Yes
   With how many individuals? _____
3. Have you had sex with women other than your wife in the past three months?
   0 No 1 Yes With how many women? _____
4. Have you ever had sex with prostitutes?
   0 No 1 yes With how many of them ? _____
5. Have you had sex with prostitutes in the past three months?
   0 No 1 Yes With how many of them ?
6. Have you ever had the following ?
   Discharge from your genital ? No Yes
   Warts on your genital organ ? No Yes
   Ulcer on your genital organ ? No Yes

7. Have you ever had the following ?
   Gonorrhoea No Yes
   Syphilis No Yes
   Chancroid No Yes
   LGV No Yes

8. Do you now have any of those listed under question 6 or question 7 ?
   No Yes

Instructions

Now seal your answer sheet within the envelope without showing it to me and give it to me when you finish.

For all of the following questions I am going to ask you, you will give me your answers by speaking loudly and I will record the answers on an answer sheet which is found with me. If you haven't understood a question, please ask me anytime to repeat the question.

May I continue with the questions now?

If yes continue, if no, stop the interview.

9. Have you ever used condom ?
   0 No go to question 16
   1 Yes go to question 10
   2 Don't know what condom is go to question 17 and omit questions 21,22,and 23

10. For what purpose have you used it ?
   1 To prevent pregnancy
   2 To prevent STDs
   3 To prevent AIDS
   4 No reason

11. With whom have you used condom ?
   1 With your wife only
   2 With others (but not prostitutes)
   3 With prostitutes only
   4 With all others except your wife
   5 With everyone including your wife

12. Do you use condom always with the person identified in question 11?
   0 No go to question 13
   1 Yes to question 14

13. Why don't you use condom always?
   1 Don't have it with me always
   2 Very expensive
   3 Don't remember it always
   4 Use it only when requested by female
   5 It creates inconvenience during application
   6 It reduces satisfaction
   7 It breaks easily
   8 Others (Specify) _____

14. Have you used the same condom for more than one intercourse?
   0 No 1 Yes

15. Where did you get those condoms from ?
   1 Friends
   2 Ordinary shops
   3 Pharmacies
   4 Arba Minch Hospital
   5 Arba Minch Health Center or Schecha Clinic
   6 Others (Specify) _____

16. (If No to question 9) Why have you not used condom ?
   1 Don't know where to get it from
   2 Not easily available
   3 Expensive
   4 It is useless
   5 Decreases satisfaction for male
   6 Decreases satisfaction for female
   7 I felt ashamed to obtain it
   8 Prohibited by my religion
   9 Didn't experience sexual intercourse
  10 Others (Specify) _____

17. Is it necessary for a male to have sex before marriage?
   0 No why? _____
   1 Yes Why? _____

18. Is it necessary for a female to have sex before marriage?
   0 No Why? _____
   1 Yes Why? _____

19. Are there any health risks to have sex with a prostitute ?
   0 No
   1 Yes What are they? _____

20. Are there any health risks to have extramarital sex?
   0 No
   1 Yes What are they? _____

21. If you had the choice would you like to use a condom during intercourse ?
   0 No Why? _____
   1 Yes Why? _____
   2 Don't know what condom is go to question 24

22. Would you advise other people to use condoms ?
   0 No Why? _____ go to question 24
   1 Yes go to question 23

23. With whom do you advise a person to use condoms ?
   1 With wife only
   2 With prostitutes only
   3 With all others except wife
   4 With everyone including wife
   5 Others (Specify) _____

24. Have you ever heard of the term AIDS ?
   0 No go to question 34 and omit questions 39, 40, and 41
   1 Yes go to question 25

25. What do you think it is? Answer _____
   0 Don't know go to question 26 then to question 34

26. Where did you hear about AIDS from ?
   1 Health institutions
   2 Radio and/ or TV
   3 Friends
   4 Classroom
   5 Newspapers
   6 Others (Specify) _____

27. Does AIDS make you sick ? 0 No 1 Yes 2 Don't know

28. Does AIDS kill a patient ?0 No 1 Yes 2 Don't know

29. Can a man get AIDS ? 0 No 1 Yes 2 Don't know

30. Can a woman get AIDS ? 0 No 1 Yes 2 Don't know

31. How can a person get AIDS ?_____
_____

32. How can a person prevent AIDS ? _____
_____

33. Can AIDS be cured ? 0 No 1 Yes
If yes how ? _____

34. Have you ever heard the term condom ?
   0 No go to question 39
   1 Yes

35. Where did you hear about it ?
   1 Health institutions
   2 Friends
   3 School (Classroom)
   4 Radio and/or TV
   5 Others (specify) _____

36. What is it used for ?
   1 To prevent pregnancy
   2 To prevent STDs
   3 To prevent AIDS
   4 Others (Specify) _____

37. How many times can the same condom be used ?
   1 Only once
   2 Twice or more
   3 Others (Specify) _____

38. Where can a person get condoms from ?
   1 Health institutions
   2 Shops
   3 Pharmacies
   4 Others (Specify) _____

		0	1	2
39.	Can AIDS be passed from male to female?	No	Yes	Don'tknow
	" " " " " female to male?	No	Yes	Don'tknow
	" " " " " prostitutes to clients ?	No	Yes	Don'tknow
	" " " "through sexual intercourse?	No	Yes	Don'tknow
	" " " " " social kissing?	No	Yes	Don'tknow
	" " " " " drinking dirty water?	No	Yes	Don'tknow
	Can AIDS " " " shaking hands ?	No	Yes	Don'tknow
	Can AIDS be prevented by using condom ?	No	Yes	Don'tknow
	Can AIDS can be passed with injections ?	No	Yes	Don'tknow

40. Do you think that you could get AIDS ?
   0 No Why ? _____
   1 Yes
41. Have you changed your sexual practice since you have heard about AIDS ?
   1 No why ? _____
   2 Yes In what way ? _____

Instructions

We thank you very much for all the answers you gave us up to now.

The last two questions which will follow now may disappoint you. We would like you to realize that the reason why we ask you these questions is not to disappoint you intentionally. We again ask your excuse for asking you these questions. You have a full right to respond or not to respond to these questions.

Are you willing to answer these questions ?

If yes continue; If no stop right there.

42. Have you ever had anal intercourse ?
   1 No
   2 Yes With how many individuals ?_____

43. Have you ever had sex with a male ?
   1 No
   2 Yes with how many of them ?_____

መጠይቅ

ቀን _____ የተጠያቂው መለያ ቁጥር _____ ቀበሌ _____

የቤት መለያ ቁጥር _____ ማጨሚ

- ትምህርት /አንዱን በመክበብ አመልክት
  0. ማንበብ ሆነ መፃፍ የመይችል
  1. ማንበብ ብቻ የሚችል
  2. ማንበብ መጻፍ የሚችል ግን መደበኛ ትምህርት ያለተመረ
  3. የመጠረሻ ያጠና ቀቀጤ ክፍል _____

- የሚተዳደርበት ሙያ /አንዱን በመክበብ አመልክት/
  1. ሥራ የሌለው
  2. የቀን ሠራተኛ
  3. ተማሪ
  4. የመንግሥት ሠራተኛ / የሥራጌን ኃላፊነት ግለጽ/ _____
  5. ነጋዴ / የገግዱን ዓይነት ግለጽ/ _____
  6. አርቶበስ ወይም ኪሚዬን አሽከርካሪ
  7. ሌሎች /ይገለጽ/ _____

- የጋብቻ ሁኔታ /አንዱን በመክበብ አመልክት/
  0. ፈጽሞ ያላገባ
  1. ባለትዳር
  2. የፈታ ወይንም የተለያዩ
  3. ባለቤቱ የሞተበት

- ጉዛ /በመክበብ አመልክት/
  1. ጋሞ
  2. ጠላይታ
  3. አማራ
  4. ኮንሶ
  5. ሌሎች /ይገለጽ/

.../

- ጠይማኖት /አንጓን በመባበብ አመልከት/
    1. የኢትዮያ አርቶዶክስ ክርስቲያን
    2. ሌሊ ክርስቲያን /ይገለጻ/
    3. አስላም
    4. ሌሎች /ይገለጽ/

መመሪያዎችን ለተጠያቂው አገብብሊችሁና የመልስ መስጪ ወረቀትን ሰጠቸው:: የመጀመሪያዎችን ሠስት ጥያቄዎች ከጠየቅህ በኋሊ ተጠያቂው መልስ ችን በተነገረው መሠረት አመልክቶ እንደሆነ አረጋግጥና በትክክል ካሊመለከተ ሯመሪያዎችን ደግመህ አሥረዳው::

<u>ጠመሪያዎች</u>:-

ከሁሉም አስቀድመን በዚህ ጥናት ጭጣጥ ለመሊተፍ ፈቃደኛ ሆነው ለቃለ መጠይቁ ሳለመው በጣም አመሰግንዎታለሁ:: ትብብርዎ በቃለ ሯጠይቁ ጊዜም እንደሚቀጥል ተስፋ እናደርጋለን::

አሁን ቃለመጠይቃቸን ለመጀመር ተዘጋጅተናል:: አብዛኛዎቹ ጥያቄዎች ስለርስዎ የግል ሕይወት የሆኑና አብዛኛውን ጊዜ ለሌሎች የማይነገሩ ና ቸው:: አንዳንዶቹ ጥያቄዎች ስለአርስዎ ሲሆኑ አንዳንዱቹ ግን አይደሉም የዚህ ጥናት ጭጤት በአርስዎና አርስዎን በመሰሉ ተሳታፊዎች የሚሰጡት የተሟሊና እውነተኛ መልስ ሊይ የተመሠረተ ነው:: ለጥናቱ ትራቅ አስተዋጽኦ ስለአለው የሚሰጡት መልስ የተሟሊና እውነተኛ እንደሚሆን ተሰፋ አለን:: የአርስዎን እውነተኛ ነት ለማበረታታት ስንል መልሰቸዎን ስዎ በማይጻፍበት የሙለስ መበጫ ጥረቀት ሊ አንጫመሌና በሚሰጥዎ ፖስታ ኢንቨሎፕ /አሸገው አንጪልሱ አንፈቅዴለዎታለን::

ይህ ጥናት ሙሉ በሙሉ ሚስጥራ የተጠበቀ ብዙ አንደአርስዎ ያሉ ሰዎች የሚሳተፉበት ነው:: የተሳታፊ ስዎ በዚህ ጥናት አሁንዎ ሆነ ቢደፊት ፊጽም የሚያስፈራንና በማንኛውም ቦታ የማይገለጽ ነው:: ሚስጥራዊነቱን ለመጠበቅና የአርስዎን እውነተኛነት ለማበረታት ሲባለ ይህ ስዎ የጣይጻፍበት የሙለስ መስጪ ወረቀትና ፖስታ ተሰጥቶዎታለ::

.../

እኔ /ጠያቂው/ ጥያቄዎቹን አንድ በአንድ ባነበብኩላችሁ መልሶቻችሁን ለኔ ሳይነግሩ በመልስ መስጫው ወረቀት ትክክለኛ ስፍራ ላይ ይመዝግቡ ጥያቄው ካልገባችሁ በድጋሚ እንዳነብላችሁ እንዲጠይቁኝ አደራ እላለሁ:: መልሶቻችሁን ሙሉ በሙሉ መዝግበው እንደጨረሱ የመልስ መስጫውን ወረቀት ለኔ ሳያሳዩ በፖስታው ውስጥ ያሽጉ በመጨረሻ ለኔ ይመልሱልኛል::

ለተጠየቁት አንድ ጥያቄ መልስዎ የአዎንታ መልስ ከሆነ በመልስ መስጫው ወረቀት ላይ በስተግራ በኩል የሚገኘውን ይህ ምልክት "✓" ይበከቡ:: መልስዎ የለም ከሆነ በመልስ መስጫው ወረቀት በስተቀኝ የሚገኘውን "✗" ምልክት ይክበቡ:: "ከምን ያህል ሰዎች ጋር ?" የሚል ጥያቄ ከ2ኛ ፣ ከ3ኛ ፣ ከ4ኛና ከ5ኛ ጥያቄዎች በመቀጠል ይነበባል:: ለነዚህ ጥያቄዎች መልስዎ አዎን ከሆነ ከምን ያህል ሰዎች ጋር እንደሆነ መልስዎን በሰዎች ቁጥር ልክ ይህን ምልክት "1" በማስፈር ይመዝገቡ:: /ለምሳሌ በመጥቀስ አስረዳቸው/:

መልሶቹን እንዴት እንደሚመዘግቡ በትክክል መረዳትዎን ለማረጋገጥ የሚከተሉትን ሦስት ጥያቄዎች እጠይቃችኋለሁ:: ከዚያም መልሶቹን እንዴት እንደመዘገቡ እመለከታለሁ:: እስካሁን የነገርኩዎት ማናቸውም ነገሮች ገብተዎታል ? ምላሹ "አዎ" የሚል ከሆነ እነዚህን ሦስት ጥያቄዎች አንድ በአንድ በዝግታ ለተጠያቂው አንብብላቸው::

ሀ. በትላንትናው ምሽት በቂ እንቅልፍ አግኝተዋል ?
ለ. ዛሬ ጠዋት ቁርስዎን በልተዋል ?
ሐ. አሁን ምቾት ይሰማዎታል ?

ማስታወሻ :- ወደሚቀጥሉት ጥያቄዎች ከማምራትህ በፊት መመሪያዎችን በጥንቃቄ በዝግታ ለተጠያቂው አንብብላቸው::

መመሪያዎች :- የሚቀጥሉት ስምንት /8/ ጥያቄዎች ሙሉ በሙሉ የርስዎን የግል ሕይወት የሚመለከቱ ናቸው:: አንዳንዶቹ ጥያቄዎች ምናልባት ያናድዱዎት ወይም ያበሳጭዎት ይሆናል:: ነገር ግን በጣም አስፈላጊ በመሆናቸው እንደዚህ ዓይነት ጥያቄዎችን ስለጠየቅንዎ

.../

ይቅርታዎን እንጠይቃለን:: ለዚህ ጥናት ጠቃሚ እውነተኛ መልሶችዎን እንዲሰጡን እንጠይቃለን:: ለነዚህ ጥያቄዎች መልስ የመስጠትም ሆነ ያለመስጠት ሙሉ መብት አለዎት::

ለሚከተሉት ጥያቄዎች በእውነተኛነት መልሶችዎን ለመስጠትና ለመመዝገብ ፈቃደኛ ነዎትን? ምላሹ አዎን ከሆነ ቃለመጠይቁን ቀጥል የለም የሚል ከሆነ ግን ቃለመጠይቁን በዚሁ አቁም::

ማሳሰቢያ :-

ተጠያቂው ፈጽሞ ያላገቡ ከሆነ ከ1ኛው ጥያቄ ጀምርና 3ኛውን ጥያቄ ሰርዝ /ተወው/፤ ተጠያቂው ያገቡ /ሚስት ባል/ ወይንም ባለቤታቸው የሞተባቸው ወይም የፈቱ ወይም የተለያዩ ከሆነ ከሁለተኛው /2ኛ/ ጥያቄ ጀምር::

1. የግብረስጋ ግንኙነት ፈጽመው ያውቃሉ ?
   0. የለም 1. አዎን

2. ባለፈት ሦስት ወራት ውስጥ ወሲባዊ ግንኙት አድርገው ነበርን ?
   0. የለም 1. አዎን ከምን ያህል ግለሰቦች ጋር ? ________

3. ከባለቤትዎ ሌላ ከሌሎች ሴቶች ጋር ባለፈት ሦስት ወራት ውስጥ ወሲባዊ ግንኙት አድርገው ነበርን ?
   0. የለም 1. አዎን ከምን ያህል ሴቶች ጋር ? ________

4. ከሴተኛ አዳሪዎች ጋር የግብረ ሥጋ ግንኙነት ፈጽመው ያውቃሉን ?
   0. የለም 1. አዎን ከምን ያህሉ ጋር ? ________

5. ባለፈት ሦስት ወራት ውስጥ ከሴተኛ አዳሪዎች ጋር የግብረ ሥጋ ግንኙት ፈጽመዋልን ?
   0. የለም 1. አዎን ከምን ያህሉ ጋር ? ________

6. ከዚህ የሚከተሉት የደረሰብዎት አጋጣሚዎች ያውቃሉን ?
   - ከብልት ፈሳሽ ? 0. የለም 2. አዎን
   - ብልትዎ ላይ ኪንታሮት ? 0. የለም 1. አዎን
   - ብልትዎ ላይ ቁስል ? 0. የለም 1. አዎን

7. ከዚህ የሚከተሉትን አጋጥሞዎት ያውቃሉን ?

- ጨብጥ 0. የለም 1. አዎን
- ቂጥኝ 0. የለም 1. አዎን
- ከርክር 0. የለም 1. አዎን
- ባምቡሌ 0. የለም 1. አዎን

8. በአሁኑ ሰዓት ማንኛውም በጥያቄ 6 ወይም 7 ከተዘረዘሩት ውስጥ አለብዎትን?

0. የለም 2. አዎን

<u>መመሪያ</u> :-

አሁን የመለሱትን ወረቀት ለኔ ሳያሳዩ በፖስታው ውስጥ ያሽጉትና ሲጨርሱ ለኔ ይስጡኝ:: ከዚህ ቀጥሎ ለሚከተሉት አሁን እኔ ለምጠይቃቸው ጥያቄዎች በሙሉ እርስዎ ድምፅዎን ከፍ በማድረግ መልሶ ቻዎን ይሰጡኛል:: እኔ ጋር ባለ የመልስ መስጫ ወረቀት ላይ መልሶቹን እመዘግባለሁ:: እባክዎን ያልገባዎ ጥያቄ ሲኖር በማንኛውም ሰዓት ጥያቄውን እንዲደገምልዎት ይጠይቁኝ ?

ጥያቄዎቹን መጠየቅን ልቀጥል ? መልሱ አዎን ካሆነ መጠይቁን ቀጥል መልሱ የለም ከሆነ ግን ቃለመጠይቁን አቁም::

9. በኮንዶም ተጠቅመው ያውቃሉን ?

0. የለም ወደ ጥያቄ 16 ሂድ
1. አዎን ወደ ጥያቄ 10 ሂድ
2. ኮንዶም ምን እንደሆነ ፈጽሞ አላውቅም ወደ ጥያቄ 17 ሂድና:
   ጥያቄ: ቁጥር 21, 22, ና 23ን ዝለላቸው::

10. ለምን ዓላማ ተጠቀሙበት ?

1. እርግዝናን ለመከላከል
2. የአባላዘር በሽታን ለመከላከል
3. ኤይድስን ለመከላከል
4. ምክንያት የላቸውም

.../

11. ከጎደም ከማን ጋር ነበር የተጠቀሙት ?
    1. ከባለቡትዎ ጋር ብቻ
    2. ከሌሎች ጋር /ግን ሴቲና አዳሪ ካልሆኑ/
    3. ከሴቲና አዳሪዎች ጋር ብቻ
    4. ከባለቡትዎ በስተቀር ከሌሎች ሁሉ ጋር
    5. ከሁሉም ሰው ጋር ባለቤትዎን ጭምር

12. በጥያቄ 11 ከተጠቀሙት ሰዎች ጋር ከጎደም ሁሉጊዜ ይጠቀሙን ?
    0. የለም ወደ ጥያቄ 13 ሂዱ
    1. አዎን ወደ ጥያቄ 14 ሂዱ

13. ለምን ሁሉጊዜ ከጎደም አይጠቀሙም ?
    1. ሁሉጊዜ ከኔ ጋር ስለማልፈዝ
    2. በጣም ውድ ስለሆነ
    3. ሁሉጊዜ ስለማሊሰታውሰው
    4. በሴት ስጠየቀ ብቻ ነው የምጠቀመው
    5. በማጠልቀው ጊዜ ምቾት ስለማይሰጠኝ
    6. በቀሊሉ ስለሚበጣጠስ
    7. ሌሎች /ይጠቀሱ/ _____

14. አንዱን ከጎደም ከአንዱ ጊዜ ቦሊይ ለገብረ ሰጋ ግንኙነት ተጠቀመው ያውቃሉን: ?
    0. የለም 1. አዎን

15. ከወዳት ነው አነዚህን ከጎደሞች ያገኙዋቸው ?
    1. ከጌደኖች
    2. ከተራ ወይበሮች /ሴቶች/
    3. ከፋርማሲዎች
    4. ከአርቢ ምንጭ ሆስፒታል
    5. ከአርቢ ምንጭ ጡና ጣቢያ ወይም ከሺቻ ክሊኒክ
    6. ከሌሎች /ይጠቀሱ/ _____

..../

16. /ለጥያቄ 9 ምላሹ የለም ከሆነ/ ለምንድነው ኮንዶም የማይጠቀሙት ?
   1. ከየት ማግኘት እንደሚቻል ስለማላውቅ
   2. በቀላሉ ስለማላገኝ
   3. ውድ ስለሆነ
   4. ስለማይጠቅም
   5. ለወንዱ እርካታን ስለሚቀንስ
   6. ለሴት እርካታን ስለሚቀንስ
   7. ኮንዶም ጠይቆ ማግኘት ስለሚያሳፍረኝ
   8. በሀይማኖቴ የተከለከለ ስለሆነ
   9. የግብረስጋ ግንኙነት ፈፅሜ ስለማላውቅ
   10. ሌሎች /ይገለጽ/ ______________________________

17. ለወንድ ሰው ከጋብቻ በፊት ወሲብ አስፈላጊ ነውን ?
   0. የለም ለምን ______________________________
   1. አዎን ለምን ______________________________

18. ለሴት ከጋብቻ በፊት ወሲብ አስፈላጊ ነውን ?
   0. የለም ለምን ______________________________
   1. አዎን ለምን ______________________________

19. ከሴተኛ አዳሪዎች ጋር የሚደረግ ወሲብ የጤና ችግሮች ይኖሩታልን ?
   0. የለም
   1. አዎን ምን ምን ናቸው ? ______________________________

20. ከጋብቻ ውጭ የሚደረግ ወሲብ የጤና ችግር ያስከትላልን ?
   0. የለም
   1. አዎን ምን ምን ናቸው ? ______________________________

21. አማራጭ ቢኖርህ ኖሮ በግብረ ሥጋ ግንኙት ጊዜ ኮንዶም ቢጠቀሙ ይወዱ ነበርን ?
   0. የለም ለምን ? ______________________________
   1. አዎን ለምን ? ______________________________
   2. ኮንዶም ምን እንደሆነ አላውቅም ወደ ጥያቄ 24 ሂድ

..../

22. ሌሎች ሰዎች [illegible]ንደም እንዲጠቀሙ ይመክራሉን ?
   0፦ የለም ለምን ወደ ጥያቄ 24 ሂድ
   1. አዎን ወደ ጥያቄ 23 ሂድ

23. አንድን ሰው ከማን ጋር ኮንዶም እንዲጠቀም ይመክራሉ ?
   1. ከባለቤቱ ጋር ብቻ
   2. ከሴተኛ አዳሪዎች ጋር ብቻ
   3. ከባለቤቱ በስተቀር ከሌሎች ሁሉ ጋር
   4. ከሁሉም ጋር ከሚስቱ ጭምር
   5. ሌሎች /ይገለጽ/ ____________________

24. ኤይድስ የተባለውን ቃል ሰምተው ያውቃሉን ?
   0. የለም ወደ ጥያቄ 34 ሂዱና ጥያቄ 39፣ 40 እና 41 ሰርዟቸው /ተዉቸው/
   1. አዎን ወደ ጥያቄ 25 ሂድ

25. ኤይድስ ምንድነው ብለው ያስባሉ? መልስ ____________
   አላውቅም ወደ ጥያቄ [illegible] ሂዱና ቀጥለህ ወደ ገጽ፡ 34 ሂድ

26. ስለኤይድስ የሰሙት ከየት ነው ?
   1. ከጤና ድርጅቶች
   2. ከሬዲዮ /ወይም ከቴሌቪዥን/
   3. ከጓደኞቼ
   4. ከ ትምህርት ክፍል
   5. ከጋዜጣ
   6. ከሌሎች /ይጠቀሱ/

27. ኤድስ እርስዎን እንዲታመሙ ያደርጋልን ?
   0. የለም
   1. አዎን
   2. አላውቅም

28. ኤይድስ አንድን በሽተኛ ይገድላልን ?
   0. የለም
   1. አዎን
   2. አላውቅም

. . . /

DECLARATION

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

Name Abraham Teklu M.D.

Signature 

Place Addis Ababa University

Date of submission May 6, 1991

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

Dr. Madeleine Fletcher 

Advisor