THE ATTITUDES OF STUDENTS, PARENTS AND TEACHERS TOWARDS THE PROMOTION AND PROVISION OF CONDOMS FOR ADOLESCENTS IN ADDIS ABABA

BY

FISSEHA ESHETU, M.D.

MAY, 1994

THESIS

PRESENTED TO THE

SCHOOL OF GRADUATE STUDIES OF

ADDIS ABABA UNIVERSITY

IN PARTIAL FULFILMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF PUBLIC HEALTH

DEDICATION

This thesis is dedicated to my wife, Tsgie Sileshi who gave me the moral support that was my driving force for the completion of the study.

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

The Attitudes of Students, Parents and Teachers Towards the Promotion and Provision of Condoms for Adolescents in Addis Ababa

By

Fisseha Eshetu, MD

Department of Community Health
Faculty of Medicine, Addis Ababa University

Approved by the Examining Board

Dr. Derege Kebede
Chairman, Department Graduate Committee

Dr. David Zakus
Advisor

Dr. Pierre Duplessis
Examiner

Dr. MelakeBerhan Dagnew
Examiner

Dr. Yemane Berhane
Examiner

TABLE OF CONTENTS

Page

TABLE OF CONTENTS..... I

ACKNOWLEDGEMENTS.....II

LIST OF TABLES.....III

LIST OF FIGURES.....IV

LIST OF APPENDICES.....V

LIST OF ABBREVIATIONS.....VI

ABSTRACT.....VII

1.INTRODUCTION.....1

2.OBJECTIVES.....9

3.LITERATURE REVIEW.....10

4.METHODS.....26

4.1 STUDY DESIGN..... 26
4.2 POPULATION..... 26
4.3 SAMPLING PROCEDURE..... 27
4.4 SELECTION PROCEDURES..... 27
4.5 SAMPLE SIZE..... 31
4.6 MEASUREMENT..... 31
4.7 VARIABLES..... 34
4.8 DATA COLLECTION..... 35
4.9 ANALYSIS..... 37

5.RESULTS..... 38

6.DISCUSSION..... 56

7.CONCLUSIONS..... 66

8.RECOMMENDATIONS..... 67

REFERENCES..... 68

APPENDICES..... 73

ACKNOWLEDGEMENTS

The preparation of this thesis would have been impossible had it not been for the invaluable support of my advisors, Dr. David Zakus and Dr. Dereje Kebede of the Department of Community Health, who willingly and happily gave me the support and guidance which was vital for the completion of the thesis.

My appreciation and thanks also goes particularly to Dr. Sally K. Stansfield who, right from its initiation, whole-heartedly helped me through all phases.

I would also like to thank the officials and staff Addis Ababa Education Bureau who gave me data and support letters instructing the concerned schools to provide me with all the necessary assistance. This has greatly helped me in the smooth conduct of the survey.

I want to express my heartfelt appreciation to the directors vice-directors, unit leaders and guidance officers of the following senior secondary schools: Medhanealem, Entoto Comprehensive, Menilik II, Addis Ketema, Nefas Silk Comprehensive, Kefitegna 20, Ayer Tena, Misrak, Yekatit 12, Ethiopia Tikdem, General Winget and Lycee Guber Mariam. They all whole-heartedly took the survey as their own and did whatever was possible within their capabilities to make the research a success.

I would also like to thank the data collectors and the Department of Community Health office and library staff who helped in the data collection and entry phases.

Finally, I would like to thank the International Development Research Centre (Canada) who through the McGill-Ethiopia Community Health Project funded this research.

LIST OF TABLES

Page

1. Social and demographic variables of students, parents and teachers who participated in the survey (Addis Ababa, 1993). 41
2. Distribution of knowledge and behavioural factors among sexually active students in Addia Ababa, 1993. 45
3. Attitude towards students' knowledge, attitude and use of condoms and AIDS (Addis Ababa). 49
4. Comparison of parents by their attitudes towards the provision of condoms at schools and socio-demographic variables (Addis Ababa, 1993). 51
5. Comparison of students by their attitudes towards the distribution of condoms in schools and socio-demographic variables (Addis Ababa, 1993). 52
6. Comparison of teachers by their attitudes to the distribution of condoms in schools and socio-demographic variables (Addis Ababa, 1993). 53
7. Attitudes towards the provision of health and sex education in schools..... 55

LIST OF FIGURES

Page

1. A schematic presentation of the procedure used to select students, parents and teachers prior to the conduct of the study. 30

LIST OF APPENDICES

		Page
APPENDIX A	- Students' Questionnaire	73
APPENDIX B	- High Schools and their Student Population in Addis Ababa.	80
APPENDIX D	- Parents' and Teachers' Questionnaires	81

LIST OF ABBREVIATIONS

HIV	=	Human Immunodeficiency Virus
AIDS	=	Acquired Immunodeficiency Syndrome
WHO	=	World Health Organization
MOH	=	Ministry of Health
NACP	=	National AIDS Control Programme (Ethiopia)
STD	=	Sexually Transmitted Diseases
IUHE	=	International Union for Health Education

ABSTRACT

A cross-sectional descriptive survey through a self-administered, anonymous and structured questionnaire was conducted from September to December, 1993 in ten high schools in Addis Ababa to determine the sexual behaviour of adolescents, their knowledge about AIDS, attitudes and practices regarding condoms, their attitudes towards the promotion and distribution of condoms in schools, and towards the incorporation of health and sex education into the regular teaching curricula and into the teachers' training curricula.

A total of 910 parents, 755 students and 232 teachers participated in the survey. The results showed that, of the 355 students, 39.8% of the boys and 5.6% of the girls have had a sexual experience. Peer pressure (35.2%) and by force (21.6%) were the most important factors that precipitated the first sexual encounter. 10.1% had coital contact with a commercial sex worker. Only 42.2% of the sexually active students used condoms on their first sexual encounter, and only 27.7% used condoms continuously on their subsequent sexual encounters. 59.0% of the parents, 56.6% of the teachers and 37.7% of the students felt that most students have adequate knowledge about AIDS. Only 38.8% of the parents, 34.0% of the teachers and 42.8% the students felt that most students have adequate information about condoms.

61.2% of the students, 60.0% of the parents and 61.6% of the teachers approved the idea of condom distribution in schools. A stratified analysis identified

only age for parents, sex for students and religion for teachers to have a statistically significant influence upon the attitude towards the distribution of condoms in schools.

An overwhelming majority in each of the three categories, 92.6% of the students, 98.7% of the parents and 96.1% of the teachers, approved the incorporation of health education into the regular teaching curricula. 80.1% of the students, 90.9% of the parents and 96.1% of the teachers also supported the idea of sex education in schools.

This study, based upon the findings, recommends that education and health policy makers to make a relentless effort to commence health and sex education by incorporating them into the regular curricula; the implementation of subsequent surveys to identify the most effective and acceptable routes of condom distribution in schools; and implementation of similar surveys in the rural settings to assess the attitudes in a different setting and acquire a more general overview for the whole country.

1. INTRODUCTION

Mankind, through its long evolution, has passed through many man made and natural calamities. These have included natural phenomena such as earthquakes, floods, volcanoes and drought, and various self-inflicted problems like war. All these have claimed the lives of many. As part of these, another entity which was, is and most probably will be unparalleled to increasing human suffering, be it by claiming lives or by simply adding to human misery, is disease. This, if looked at separately, is one of the challenges mankind has not been able to totally control in its conquest over nature. Diseases such as malaria, schistosomiasis, tuberculosis and many others continue to kill millions every year.

Diseases occur generally in two ways: on a continuous basis occurring over the entire year; or on a sporadic basis as epidemics claiming large numbers of victims within a short period of time.

All this has forced mankind to give due attention to diseases, in part accomplished by increasing efforts to solve the mystery surrounding their causation once and for all, or at least to bring them to manageable proportions.

This effort has brought about the evolution of medicine from its crudest form to its present state of sophistication; and because of this, medicine has been able to explain the causes of diseases to the lowest possible level, namely, bacteria, fungi, viruses, neoplasia and many others. Medicine's success did not stop with only identifying the causative culprits, but

continued to develop potent cures for many kinds of diseases. As a result, many diseases, such as tuberculosis which used to be called "The Black Death" (1348-50) and which killed almost half the population of Europe at that time, are now under control. But despite all this effort, medicine has yet to come up with solutions for many of the unresolved riddles in the fight against diseases.

Adding to all the above, a new disease entity, Acquired Immunodeficiency Syndrome (AIDS), has now become a reality. It is considered as one of the greatest challenges mankind has ever encountered.

Since its discovery/identification in 1981, scientists from all over the world have struggled hard to unravel the mystery that surrounds this disease. In fact, it can be said that all these efforts have made it unparalleled in getting attention in recent history,at least since after the eradication of smallpox. This attention is not limited only to the medical society, but concerns about the disease have become common among all people, religious, political and many other social sectors included.

Why is this so? Is it because the disease is killing more people than other diseases? Or is it because it is spreading so fast or since there is no cure envisaged at least in the near future?

Some of the major reasons why this disease is getting such prompt attention include: the fact that it is a disease associated with one of the most sensitive and very difficult human behaviours to address, namely

human sexuality. For centuries, this aspect of human life has been regarded as private, left only to the individual's internal quarters, and because of religious and other social influences it was ordained to be so.

The enigma associated with the acquisition of the disease, considering it as God sent or caused by evil spirits and happening as a result of man's wrong-doing, forcing people to have various conceptions and misconceptions, has again made it a sensitive issue.

The stigma surrounding people who have acquired the disease has also made it a top social issue, ranging from isolating (quarantining) them to integrating them into the normal social spheres. Again, the fact that the disease haunts the young and the economically productive, making them inversely dependent or even decimating them and leaving many orphans and many more looking for support, has also made it a top political, social and economic issue.

From the medical aspect, the fact that no cure is envisaged, at least in the near future, also makes it a pressing issue. Therefore, due to all this, AIDS is now being considered one of the top issues of this century.

From the descriptions provided above, six characteristic features of AIDS can be identified:

1. The disease is spreading rapidly;
2. There is no cure for the disease;
3. The young population is characteristically affected;
4. There are distinct predisposing behaviours associated with its acquisition; and

5. Until a cure is discovered, emphasis should be on preventive measures.

The fact that the disease is spreading rapidly and that there is no cure for it needs no further elaboration. The question to entertain then is whether the spread can be halted. From this perspective, there are some very important measures that can be taken.

1. Identifying people with high risk behaviours (for getting AIDS) and educating them to change their behaviours - a long term but fundamental process.

2. Conducting continuous surveillance to follow the spread of the disease, and to identify those that have it, so as to provide them with appropriate services such as counselling and medical and social care. This will, to some extent, help prevent them from spreading the disease.

Obviously the implementation of all the above measures is equally important to all sectors of society. But particularly, adolescents are the ones to whom these services should be given more emphasis. The rationale for this is that adolescents are characterized by undeveloped responsible behavioural decision-making, experimentation, subjection to peer influences, and lack of knowledge about the disease and protective measures against it. Above all, if influenced properly, they are the most likely group to show favourable and deep rooted behavioural changes, which is the ultimate purpose of any AIDS intervention programme (Cernada, 1986; Hygie, 1988; Kapila, 1990; Ayo, 1991).

Another very important reason why we should focus on this group is that, they are future parents and if the intervention, be it educational or otherwise, brings about cultural and behavioural changes in them, then surely they will influence the practices of their offspring - the next generation, and many more after it.

Any intervention measure focused towards adolescents should appropriately aim at schools which is where at least a substantial proportion of them are found. The reason for selecting schools is not only because they are "simply" available; in schools, it is easy and conducive to provide them with information alongside their formal training; they will not be (at least to a certain extent) subject to cultural and social influences, and most important of all, they will have the chance to internalize what they have been taught among themselves.

Once it has been decided that adolescents and schools should be targeted in the strategy to control AIDS, other equally important issues then emerge, like how to approach them and what topics to raise, particularly with respect to the sensitive issues of sexuality, AIDS, and prevention measures such as the provision of condoms. These issues, unless carefully designed and appropriately provided at the right moment, can become the focus of controversy and may even raise serious contradictions. This is particularly more so in traditional and religiously dominated societies.

Therefore, if effort is to be envisaged on these issues, society has to first be sensitized and made to realize the gravity of the problem. Associated with this,

it has to be convinced that adolescents are in fact a very vulnerable group, and that unless measures are taken, they will be the next victims of an even larger epidemic.

When we move past the general perspective to the particular situation here in Ethiopia, we find that not much has been done towards addressing these very important issues. There have been very few studies that have tried to measure the sexual activity patterns of adolescents in Ethiopia. In addition, no concerted and sustained effort has been implemented towards bringing about behavioural changes among adolescents through education. There is no national guideline or policy aimed at incorporating health education into the general school curricula. And no one has asked the general population about its feelings towards these issues and what they feel is best implemented on issues ranging from adolescent sexuality to how to bring about behavioural changes among the youth, including providing them with protective measures such as condoms.

Therefore, if more baseline surveys are conducted addressing these issues, deeper insights will be attained as to how the population feels about the whole thing, and this will help policy developers and concerned organizations to bring about concerted efforts in the bid to bring this disease under at least some control.

This study, therefore, in keeping with the above ideas, first assesses the sexual activity pattern of adolescents in Addis Ababa, then measures parents', students' and teachers' attitudes towards implementing

preventive measures, particularly the provision of condoms to adolescents, and finally it assesses their attitudes towards incorporating health and sex education into the school curricula.

Before embarking upon the study, the study objectives were reviewed from the point of view of the following measures: relevance, political acceptability, applicability, timeliness, ethical considerations and duplication.

As has been described in detail earlier, AIDS is now a major problem that is spreading alarmingly and whose effects are not sparing any sector of society, particularly young people who for various reasons possess predisposing behavioural characteristics. Therefore, research geared towards investigating the status of the AIDS pandemic, and ways of prevention and education are priority areas and this study can be regarded as relevant and contributory to this.

Issues contained in this study such as the distribution of condoms to adolescents in schools and the provision of health and sex education are political and timely issues because they involve policy implications. Therefore, recommendations given in studies such as this one are likely to have influence in reorienting perceptions and in program developments.

This study is also quite different from the very few studies previously conducted in Ethiopia because it goes one step further in dealing with the same issue. Previous studies dealt only with measuring the sexual activity patterns and attitudes, knowledge and practices with

respect to AIDS. This study, on the other hand, not only measures sexual activity patterns and attitudes and knowledge towards AIDS and condom use, but it also tries to come up with possible recommendations of intervention measures; that is, the provision of condoms for adolescents in schools.

It is also felt that, since the concerned groups were approached and their feelings towards this issue were sought, this would make the study acceptable to the study population as this process of involving them would create within them a feeling that they have been made part of the implementation process.

2. OBJECTIVES

2.1 General Objective

To provide new knowledge to further guide policy development with respect to reducing the spread of HIV infection through the promotion and provision of condoms in high schools.

2.2 Specific Objectives

1. To assess the sexual activity patterns of high school students
2. To evaluate the students' attitudes and knowledge towards the use of condoms
3. To determine what students, parents and teachers feel towards the promotion of condoms in schools
4. To evaluate the students', parents' and teachers' attitudes towards incorporating into the regular school curriculum a separate health education course with a focus on sex education and incorporating a complementary curriculum in the teacher training institutes.

3. LITERATURE REVIEW

Since its identification in 1981, AIDS has been spreading over the world at an alarming speed. By 1990, it was estimated that there were 8-10 million people infected with HIV, or 1 in every 400 adults (Merson, 1990). This figure was expected to reach 15 million, that is 7.4 million males, 5.9 million females and 1.3 million born with infection, the world over by 1993 (Torantola, et al, 1993). Now, it is estimated that someone in the world becomes infected every 18 seconds. In Africa alone more than 3000 new infections occur every year, and if uninterrupted, this figure is expected to reach 30-40 million by the year of 2000 (Williams and Ray, 1993). Characteristically 20% of those infected with HIV are expected to be between the ages of 20-29 (More, et al, 1990), and with this it is estimated that, given the long incubation period, the mean latency time of the illness being eight years (Hein, 1989), a substantial number of those infected may have acquired the disease at earlier ages, perhaps in their adolescence.

Reports on the situation in Ethiopia demonstrate that, from January 1986 - June 1993, 6726 AIDS cases were reported from 47 hospitals in the country. 41% of these were residents of Addis Ababa. The largest reported number was in 1992, accounting for 48.41% of the total reported since 1986. By 1993 the sex ratio of those reported was 1.6:1, male to female, and the 15-19 age group accounted for 5.81% of the reported cases, and those aged 20-24 years constituted 19.81% of the total

cases. 3.9% of the total reported case were students (NACP, 1993).

The Ethiopian National AIDS Control Programme (NACP) estimates that by the end of 1994, 536,600 persons will carry the disease, and in the same year 18,315 new cases of AIDS will be diagnosed (NACP, 1992).

All the above reports clearly point to the disease spreading very rapidly, and secondly that adolescents, the focus of this study, represent quite a significant number of those being predisposed to and even acquiring this dreadful disease.

In many countries, adolescents account for a larger proportion, around 20-25%, of the total population (Fathallah, 1990). Today there are about one quarter of a billion aged between 10-19 years (Filimona, 1992). Constituting a large proportion of the population and also from various behavioural, cognitive and developmental perspectives, they are labelled as a vulnerable group and deserve due attention interms of research and prevention.

What are the major factors that predispose them and make them a vulnerable group? The first and most important factor is that adolescents are now increasingly sexually active at earlier ages than before due to:

- earlier onset of menarche (Ayo, 1991);
- social change and modernization;
- delayed onset of marriage; as reported in a study that reviewed this situation in 36 African, Caribbean, Latin American and Middle East countries, that between 1985 -1991, there has

been a rise in age of marriage (Population Report, 1992);

- lengthening of socially defined period of adolescence (Ayo, 1991);
- more and more students, particularly females are now significantly away from home, attending school which relieves them in a way from direct family control;
- peer pressure (Gruen, 1991); and
- and behaviouraly, as described by Boyer, (1990), this stage is characterized by experimentation, exploration, and most important of all, perception of personal invulnerability (Boyer, 1991; Tyden, 1991).

As described above, the early onset of adolescent sexual activity, which will be described in detail later, coupled with their lack of knowledge and information about the disease and its prevention, which is again made worse by their not being taught adequately on these matters in school (Cernada, 1986), and family settings, and finally, their inability to make responsible decisions pertaining these matters, have all made them a susceptible group to the acquisition of the disease.

To substantiate this, we can consider the conclusion from three very important perspectives:

1. demonstrating that adolescents are indeed sexually active;
2. demonstrating that a substantial majority of the sexually active ones are not using condoms, the only protective measure available;

3. convincingly presenting that adolescents lack basic information and knowledge about the disease and its prevention, and even if they have it, that it has failed to bring about desirable behavioural changes.

Many studies have been conducted all over the world that have tried to assess the sexual behaviours of adolescents. If we systematically review these studies and commence from the American continent, in the USA, Keageles et al, (1989) reported a sexual activity rate of 53% and 72.2% for females and males respectively. Nickerson, (1990) in his survey in Indianapolis, found that 46% of all adolescents have had coital experience. Grant, et al, (1988) revised several studies conducted in the USA and reported them as follows: in 1979, Sorenson, from a national sample of 411 adolescents, found 58% of male and 39% of female adolescents to be sexually active; Coles and Stokes, (1985) found from a sample of 1000 adolescents, 46% of the boys and 24% of the girls to be coitally active; the national survey conducted by Kanther and Zelnik (1971, 1976, 1979) of unmarried female adolescents between the ages 15-19 years found an increase in sexual activity over the decade, reporting 28% in 1971, 39% in 1976, and 46% in 1979. They again conducted the first survey on male students in 1979 and found that 69% were sexually active. The national survey of young women found the mean age for onset of sexual activity to be 15.5 years for blacks and 16.4 years for whites (Grant, 1986).

In another survey, the 1983 National Survey of Youth revealed that by age 15, 17% of the boys and 5% of girls;

by age 17, 48% of boys and 28% of girls; and finally by age 20, 80% of the boys and 74% of the girls were sexually active, indicating a progressive rise in sexual activity as age advances. More interestingly, Keageles, et al, (1988) found in their Indianapolis survey that 40.3% of the females and 69.4% of the males had more than one coital partner, definitely an indication of the extent of risky behaviour.

Kerr, (1990) reported, in the Canadian Youth and AIDS, Study 31% of male and 21% of female 9th grade students to be sexually active, and this figure rose to 49% of males and 46% of females by grade 11.

When we proceed to the Latin American situation, perhaps the most recognised and extensive survey was the Young Adults Reproductive Health Survey conducted between 1986-1989 in Jamaica, Costa Rica and 10 cities in five other countries; namely: Brazil, Guatemala, Mexico, Chile and Ecuador. It was reported in this study that the sexual activity pattern ranged for males from 42% in Mexico to 78% in Jamaica and for females, from 12% in Guatemala to 55% in Jamaica (Population Reports, 1992).

In Europe, Misfeldt, et al, (1989) conducted a survey in Greenland and reported that 18.9% of males and 17.3% of females were be sexually active. Again they found the average number of partners for males to be 5.5 and for females, 4.4. Tyden, et al, (1991) in their survey in Sweden found that 50% of females and 45% of males were sexually active and 36% of these had had coital experience before the age of 15 years. Kjoller, et al, (1989) in another Swedish survey, found out that

34% were sexually active and the average number of intercourse contacts among the sexually active adolescents was five times per month.

In Africa, the situation is quite similar. Douglas, et al, (1986) in their Ibadan, Nigeria survey of the sexual behaviours of adolescents found that 59.9% of the boys and 38.4% of the girls were sexually active. The figure was substantially higher for those adolescents who were not enrolled in schools, where it reached 76%. Ayo, et al, (1991) in a survey conducted on 3000 Kenyan unmarried youth, reported that the sexual activity figure for males was 62% and that for females it was 39%. They also reported the mean age for the commencement of coital experience to be 13 years. In another survey by Nicholas, et al, (1987) in Liberia, it was reported that 30-49% of the female students had sexual intercourse at least once a month, and greater than 80% of the non students were sexually active. Abdool Karim, et al, (1992) in their research in Natal province, South Africa, found out that 34% of the students were sexually active. Again, in a very large study conducted on 8487 women in Nigeria, Feyisetan, et al, (1989) reported that 38.4% of the secondary school students were sexually active. This figure rose with university students and non-students to 61.2% and 91.5% respectively.

The very few studies conducted here in Ethiopia also demonstrate a similar pattern. Bisrat (1992), in a study conducted in Harar found that 65% of the male and 20% of the female 11^{th} and 12^{th} grade students were sexually active. Tesfaye, et al (1993), conducted a survey in

Jimma town on 535 subjects, and reported that 40% had had an unprotected sexual activity during the last month, and the prevalence of high risk sexual encounter was high. Asnake, et al, (1993), conducted a study on Northwestern Ethiopian adolescents and found that 52.8% were sexually active. The majority had their first sexual encounter before the age of 16 years, and the mean number of sexual partners was 3. Gebre, (1990) in a study conducted among senior high school students in Addis Ababa found that 53% of the boys and 24% of the girls were sexually active. 70% of these had their first sexual encounter between ages 14-16, and 70% of the girls and 95% of the boys acknowledged having more than one sexual partner. G/Kidan and Azeze (1993), in the Gondar College of Medical Sciences students' survey, found that 58.3% had had a coital experience; of these, 61.4% had one partner and 38.3% had more than one partner. They also reported that 23.2% had high risk behaviours, such as contact with commercial sex workers (23.3%) and history of an STD (5.3%).

The sexual activity patterns of students can be summarized as follows. All the above studies, without exception claim that adolescents are in fact sexually active, with figures ranging from 17.3% to 83% and that this trend is increasing. Due to all these, adolescent sexuality is not an issue to be ignored. In fact, Grant, (1988) summarized this issue beautifully as: "... sexuality is not unique to the adolescent period, but is a phenomena that spans the entire life-cycle. What is remarkable about adolescence is that complex physical,

cognitive and psychological changes affect how sexuality is expressed. Physical maturity and the ability to engage in sexual activity does not necessarily imply sufficient cognitive maturity to understand and anticipate undesirable consequences such as pregnancy and STDs. Health providers who care for this age group must understand adolescents' evolving sexuality and be prepared to help them take responsible behaviours".

If we consider this aspect only, then as will be substantiated later, we will be tempted to label almost all sexually active adolescents a high risk group because all surveys conducted up to now have demonstrated beyond doubt that most of them do not practise safe sex, particularly by using condoms.

Again, when we review the studies systematically, Keagles, et al (1988), in their US survey, found that only 8.2% of the male and 2.4% of the female adolescents used condoms every time they had sex. Tyden, et al, (1991) in Sweden found that 40% did not use any protective measure on their first intercourse, and 25% never used any protection in the last intercourse. Kjoller, et al, (1989) again on their Swedish survey, similarly reported that 42% of the students reported not using condoms during the last intercourse, and 90% of the students wished they received free condoms.

Coming back to Africa, Douglas, et al, (1986) in their Nigerian survey reported that 52.1% of the all the male sexually active adolescents and 94.9% of the females never made their partners use condoms. Avo, et al, (1985) reported in their Kenyan survey that 89% of the

sexually active adolescents did not use condoms. Abdool Karim, et al, (1992) in their South African survey reported only 47% used condoms at least once, but none had used a condom on every sexual encounter. They enumerated some of the most important barriers to the use of condoms as: students perception that condoms limit sexual pleasure; condoms indicate lack of trust on the partners' faithfulness; it challenges the male ego; it was associated with STDs; they are not accessible or available when needed; use was not sufficiently understood; and its contraceptive behaviour was viewed with suspicion.

In Ethiopia, the findings are not different from the previous studies. Bisrat (1992), in his Harar study, reported that only 20% of sexually active students used condoms. Asnake, et al (1993), concluded that a substantial number of the sexually active adolescents never use condom. Gebre (1990), found that 76.7% of the boys, 92.9% of the girls and overall 82% never used any protection. Gebre Kidan and Azeze, (1993) acknowledging the minimal use of condoms by their respondents, went on to enumerate the most important barriers to condom use as: partner belief (43%) and unavailability (34.6%).

The fact that condoms significantly reduce the risk of HIV infection is beyond discussion (Morlet, et al 1989). With the AIDS crisis and increase in other STDs and the need to develop safer and more effective barrier contraceptives, attention has been reoriented to the only available protection, the condom (MBIZVO, 1990).

The above being the case, that is, adolescents being

sexually active and the condom being the only protective measure, we can no longer ignore the association of condoms with adolescents. We cannot also ignore the fact that they are sexually active and rely only on talking about abstinence (though this should be promoted also); the facts will force us to reorient our efforts towards educating them to exercise safe sex, through maintaining a single partner, and if this is not possible, to always use condoms. This view has also been supported by many investigators. Asnake, et al, (1993) recommended that this effort towards adolescents should not concentrate only on urban areas but should extend to rural communities with special emphasis on information, education and communication (I.E.C) as well as condom promotion. Gebre Kidan and Azeze, (1993) concluded that "it should be seen as a right for young people to have access to adequate information about HIV/AIDS. They should have the right to have access to services including the condom". They even went further to recommend that condoms should be distributed to students through dormitory house fathers and mothers, class representatives, and tea rooms throughout the week. This view has again been supported by many others from abroad (Abdool Karim, et al, (1992); Avo, et al, (1993); Tyden, et al, (1991); Kjoller, et al, (1989); Kerr, (1991); Mbyzvo, (1991) and Keagles, et al, (1988)).

There are two important concerns that need to be addressed at this juncture. The first one is, if condoms are to be distributed to students, will this be promoting their sexuality; and secondly, is this really what they

want?

The issue here is not the demonstration of whether adolescents are sexually active, but the fear here should be, whether condoms are distributed or not, the increasing trend of adolescent sexuality that is occurring in the milieu the spread of AIDS and their risky behaviours such as low condom use patterns. The WHO, (1993), has announced after reviewing various studies all over the world, that access to contraceptive methods including condoms and counselling did not lead to earlier or increased sexual activity; but on the other hand, it increased the "safe sex" practice through increased use of condoms (Global AIDS News, 1993).

The second issue, "do students really want condoms to be made available?" can substantively be supported by taking the vivid examples from Canada, USA, and Zambia.

Kerr (1990) reported that the increasing sexual activity patterns have prompted schools throughout Canada to improve sexual education and install condom vending machines in secondary school wash rooms. In many schools, he stated, this idea of installing vending machines was student initiated, as in the case he described at Lisgar Collegiate in Ottawa, where students struggled with their school officials, district education officials and public opinion. They fought to materialize this idea from January through June, 1989, and finally their relentless effort was rewarded by the installation of condom vending machines in their school premises. Since then, the Quoquitlam School District, Vancouver Island, British Columbia and Toronto's 36 secondary schools have

installed such machines.

Kerr, (1991) again reviewed a similar situation of students' battles for the instalment of vending machines in their school compounds in the USA. Prior to 1991, he described that there were just few and fragmented efforts to provide condoms for adolescents. These were: in 1988, Adams Country Schools District; Commerce City, Colorado; 1990,Cambridge School in Massachussets; and in 1991, the Baltimore Health Department made condoms available free of charge. Perhaps, he stated, a significant change in the US in this direction was the passage of condom availability plan by New York City School District on February 27, 1991. According to this plan, in 120 New York high schools, condoms would be made available to 261,000 students. This effort did not materialize on its own; there were a number of problems and obstacles to be tackled and overcome.

One of the most anticipated obstacles was parental opposition. Parents feared that this would increase adolescent sexuality. Since condoms were available everywhere, they felt there was no need for distributing it in the school premises.

This prompted Roper to poll a random sample of 1004 parents and surprisingly and unexpectedly , he came up with a figure of 64% supporting the idea of distribution. The reasons for most of the parental support were fear of adolescents' contracting the diseases, reluctance of many teens to purchase condoms in community due to embarrassment and resistance from store clerks to sell to them, and finally, the cost. This convinced officials to

accept the fact and ratify the plan. Students, on the other hand, were too anxious to wait for the programme to start and some of them even went as far as going to the various schools and distributing them themselves.

The Zambian situation was different. As described by Mouli (1992), the battle there was between health officials and religious leaders and the "public" in general. In 1987, the anti AIDS campaign started-off with no or minimal mention of condom for fear that it might spark public opposition. In the middle of 1988, the health personnel, considering the deteriorating situation, published a booklet entitled, "Information of AIDs for Secondary Students," which advocated abstinence before marriage but suggested the use of condoms as a possible alternative for those who were sexually active. This really sparked off bitter controversy, enraged religious leaders who apparently to accused the project of flaunting un-Christian, un-African values, destroying Zambian culture, corrupting the youth and promoting promiscuity. This stranded the top policy makers between two opinion categories. Finally, through intensive negotiations that lasted over a year, they were able to secure an agreement between each category not to unjustly accuse the other, thus facilitating better grounds for health officials to operate.

The world-wide general situation, then, is that of recognizing adolescents' increasing sexual activities, and moving more and more towards emphasizing prevention of the disease by providing adequate information and promoting condom use.

This being the case, there are various important things that must be considered before embarking upon endeavours such as this. Schools cannot simply be entered and condoms distributed. Careful planning and assessment of the students' knowledge of AIDS/HIV and condoms has to be done; and the most effective ways of provision have to be outlined in detail.

Regarding the assessments of knowledge and the need for education, various surveys have been conducted. YARHS (1992) indicated the need for better sex education and innovative family planning services (Population Reports, 1992). Cernada, et al, (1986) in their Taiwan survey, found out that adolescents lacked knowledge about contraception, are not being taught adequately on these issues at schools, and that they wanted to learn more about intimate relationships between the two sexes and looked up to schools to be active sources of information and education. In Taiwan, Kranski, et al (1990), reported that the widely introduced AIDS education has been well accepted by the students. Mbizvo, (1991) and Salt, et al, (1989) and Gebre (1990) described the need for the provision of health education for adolescents. Bisrat (1990) stated that 93.7% of the students approved the provision of information in schools about contraception and STDs. The only study that we have come across that reported that education did not bring about the anticipated change in behaviour was that of Allen, et al, (1992). They did not completely reject the impact that health education would have on behaviour, but they suggested for a revision of ways for improving the

delivery system. The fear here is, "will bombarding adolescents with information such as this make them more conscious of their virility and hence promote sexuality and promiscuity?"

Perhaps the strongest and most conclusive rejection of speculations such as this was provided by the WHO (1993). They critically reviewed 19 studies conducted all over the world and disproved that sex education and availability of contraception encouraged sexual experimentation. In fact, sex/AIDS education encouraged adolescents to delay sex initiation and to practise safe sex if sexually active.

They also found out that schools that promoted postponement of sex and use of condoms were more effective than those which promoted abstinence alone (Global AIDS News, 1993).

To consolidate the above, the executive director of the Global Programme on AIDS (GPA) reported on the 3rd Pan American Congress on AIDS and the 9th Latin American Congress on STDs, that health education programmes delayed initiation of unprotected sex. AIDS education is associated with fewer sexual partners, reduced frequency of intercourse and more condom use. It was not associated with the boost in sexual activity.

In conclusion Freudenbreg (1989) who vividly described the situation, stated that "... for no other group are the benefits of AIDS prevention more clear-cut than for children and young people. On the one hand, the prevalence of infection and AIDS in this age group is relatively low, and on the other hand, the behaviours

that put young people in the path of HIV are alarmingly widespread. These factors, combined with the social and economic advantages of intervening before risky behaviours become well established, make AIDS education for young people a high priority".

Thus the speculation that various behavioural, cognitive, social, economic and developmental factors predispose adolescents to develop risky behaviours, has been demonstrated to be a reality. What is most distressing though is that the active ones are either not aware of or use protective measures such as condoms or they are not interested in using them. These issues obviously necessitate the need for bringing about fundamental behaviour changes through whatever means it takes, like provision of consolidated and sustained education and other measures such as the provision of condoms, depending upon the tangible situation in every community.

4. METHODS

4.1 STUDY DESIGN

A cross-sectional survey on sexual activity patterns, attitudes and knowledge regarding the use of condoms, attitudes towards the provision of condoms at schools, and attitudes towards incorporating health and sex education into school curricula was conducted among students in ten high schools in Addis Ababa over a period of one month (December, 1993).

A similar cross-sectional survey was also carried out on the attitudes of parents and teachers on the issue of providing condoms for high school students, their perception of students' sexual activity pattern, knowledge towards condoms and AIDS, and on other issues related to the provision of health and sex education as a separate course in schools.

4.2. POPULATION

The source population consisted of students, parents and teachers of all 38 high schools in Addis Ababa. The study population was obtained from ten high schools that were selected using the probability proportionate to the size (PPS) method. Students of both sexes attending grades 9 - 12, parents and foster parents of students in the selected schools, and teachers teaching in the same high schools were considered to be eligible for the study.

4.3 SAMPLING PROCEDURES

A multistage sampling procedure was used to select subjects to be included in the study (see Figure 1), though no particular inclusion or exclusion criteria were used. The first step was the identification of ten high schools where the questionnaire was to be administered, and selection of three other schools where focus group discussions would be conducted. First, ten high schools were identified using the probability proportionate to the size (PPS) method. Then from the remaining 28 high schools 3 other schools were chosen for the focus group discussions.

4.4 SELECTION PROCEDURES

4.4.1 FOCUS GROUP SELECTION

From the randomly selected three schools, one class of each grade was chosen by a simple random selection process. Then, from the already identified class, seven female and seven male students were selected to participate in the focus group discussions. These were held in two stages: one, prior to the development of the questionnaire to obtain preliminary information on the pertinent issues to be included in the questionnaire and to obtain students' views on the importance of the conduct of a study at this time; and the second, after the development of the questionnaire, to pretest the

questionnaire itself, to obtain students' views on the various questions included in the questionnaire, and to look for issues that they themselves felt were important enough to be included in the questionnaire.

4.4.2 STUDENT SELECTION PROCEDURE

A specific number of students was allotted initially to each school depending upon the sample size (see below) and the student population weight of each school. The total required number of students in each school was again divided by four to ensure an equal distribution of all grades (9-12). Then, from each grade, four classes were chosen on a simple random basis. The number of students assigned to each grade was then evenly distributed to these four classes. Finally, from each class 50% female and 50% male students were randomly recruited for the purpose of questionnaire administration using the class role number as a sampling frame.

4.4.3 PARENT SELECTION PROCEDURE

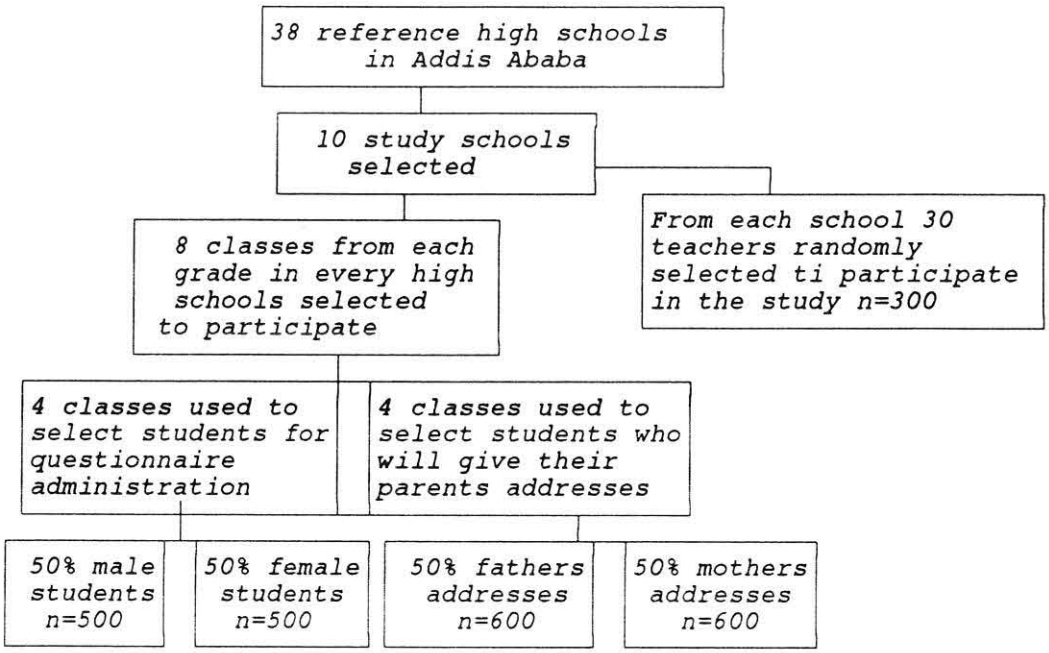
According to the prescribed number allotted to every school, grade and class as described above, four classes were identified from each grade in the same ten schools on a simple random basis. Then from each class students were identified using a simple random basis to give their parents addresses. 50% of the students were randomly

asked to give their fathers' addresses and 50% their mothers' addresses. The particular parent chosen for the study was then traced using the already obtained address and was asked to participate in the study.

4.4.4 TEACHER SELECTION PROCEDURE

From each of the ten schools 30 teachers were randomly selected to participate in the study.

Figure 1: A schematic presentation of the procedures used to select students, parents and teachers prior to the conduct of the study.



4.5 SAMPLE SIZE

On the basis of no previous relevant data on most of the issues to be considered in the study, and on the assumptions of obtaining a sample size that was large enough to come up with strong conclusions and/or detect small differences, and assuming that there would be no difference between the two groups of respondents, and giving any particular outcome to be within a margin of error of 3% with confidence of 95%, a sample size of 1060 was obtained for the student sample. For the purpose of comparison, a similar number of parents was included in the study. But fearing that it might be difficult to trace addresses and even the particular parent, a 20% excess of parents were recruited for the study raising the parent sample size to 1200.

With regard to teachers, the presupposition was that the teaching community size would be similar in most schools only with a very minor variation in some schools. Due to this, an equal number of teachers (about 30) was chosen from each school: fifteen from the morning shift and an equal number from the afternoon shift. This brought the total number of teachers needed for the study to 300.

4.6 MEASUREMENT

Two structured questionnaires were developed to measure the attitudes of parents, teachers and students towards the sexual activity patterns of high school students, to assess their attitudes towards the promotion and provision of condoms at high schools, and of

students' knowledge about AIDS and condoms, and finally, to assess whether health and sex educations should be provided as separate subjects having their own school based curricula.

The questionnaires were used separately, the first being different from the second in context and type of questions. The first one was prepared for parents and teachers (see Appendix) and the second one for students.

The questionnaires were initially prepared in English and were first seen by three senior faculty members of the Department of Community Health who commented on changes, additions and improvements to be made based upon context and completeness. They were then translated into Amharic and again the Amharic versions were checked by two Amharic speaking teachers of the same department in order to ensure the correctness and completeness of the translated material. All questionnaires were administered in Amharic.

In the students' questionnaire, a total of 49 questions were included, including some on demographic issues. In the parents' and teachers' questionnaire a total of 30 questions were included. Most of the questions were designed in such a way that the respondents chose only the most appropriate answer (i.e., they were close-ended questions). With some questions, though, on issues where deep insights and a wider variety of responses were possible, respondents were allowed to respond in any way they chose (i.e., these were open-ended questions).

The two sets of questions also contained clear instructions to guide respondents to properly answer the questions and they also specifically emphasized a guarantee of anonymity and the method for returning the completed questionnaires. A section was also included for clearly recording the participants' consent to participate.

The already prepared students' questionnaire was pretested on 40 students randomly selected from various grades in one of the schools chosen for the focus group discussions. After the pretest, a focus group discussion was conducted with the same students on the following issues:

1. the clarity of the context and wording of the questions;

2. issues excessively dealt with in the questionnaire and in need of reduction;

3. important issues that were not included in the questionnaire but that needed to be included;

4. the relevance of the study at this moment; and

5. whether they think the questions are too sensitive, thereby drawing response rates that might be very low.

The focus group discussions helped in identifying weaknesses and strengths of the questionnaire, and based upon the resulting suggestions some alterations were made and the questionnaire was finalized for administration.

Similarly, the parents' and teachers' questionnaire was pretested on 30 parents randomly chosen from the same school. After obtaining feedback some alterations were

made and the questionnaire was finalized for the conduct of the survey.

None of the pretest participants were part of the study population.

4.7. VARIABLES

For the purpose of attaining the objectives of the study, questions were developed and organized in such a way that measurement of the following variables was attained:

1. The sexual activity patterns of high school students, including (a) the proportion of sexually active students; and (b) the presence of any high risk behaviours, such as multi-partner sexual contact and the use/non use of condoms.

2. Attitudinal variables

(a) on the knowledge and attitudes of students regarding AIDS and condoms;

(b) on the attitudes of students, parents and teachers towards the promotion and provision of condoms in high schools; and

(c) on the attitudes of students, parents and teachers towards the provision of health and sex education as a separate course in high schools.

Other socio-demographic variables, such as age, sex, parental marital status, monthly income, religion and ethnic grouping were included to allow later determination on how they relate to the major dependent variables.

4.8 DATA COLLECTION

4.8.1 DATA COLLECTION FROM PARENTS AND TEACHERS

The first stage of the study was collecting data from parents and teachers. In order to facilitate this, ten data collectors and two supervisors were recruited. Of these, ten had completed grade twelve and two were nurses (the supervisors). These were then provided with a two day orientation session on the purpose of the study, content of the questionnaires, procedures of how the students were selected, how the questionnaires were to be filled in, how they were to be returned, ways of tracing parents, and what they should do if they encountered setbacks. During this session they were provided with the opportunity to raise issues that needed clarification and thorough discussions and responses were given to their questions. The data collectors were also made to simulate the actual situation by practising the procedure among themselves.

After completion of the orientation session, each was given a letter of identification stating that he/she is a member of the study group and all were told to present it wherever they went.

Finally, after completing all the preliminary preparation each was provided with addresses and questionnaires. They then traced the parents using the addresses. Once having found them, they would give the questionnaire and an envelope to the parent and ask them to fill in the questionnaire, seal it and return it immediately. If the parent was illiterate, the data collector him/herself read the questions and recorded the

responses accordingly; the parent then sealed the questionnaire in the envelope. Each data collector then gave the parent another slip to be filled in and left. The parent, having filled in the slip confirming that he had participated in the study and that the data collector had actually come, would then send the slip back to the school through his/her son or daughter. This confirmatory slip served as a counter check that the particular parent had been visited by the data collector. This whole process took place from December 1 - 30, 1993.

Concerning the teachers, they were approached at their school by the principal investigator and were provided with the questionnaire. After completing it, they sealed it in the provided envelope and returned it to a designated person at each school, in most cases the vice-principals of the school, from whom they were later collected.

4.8.2 DATA COLLECTION FROM STUDENTS

Administration of the questionnaire to the students was conducted by the principal investigator and his team. This was done by first approaching the school principal in each school and getting a coordinator to assist in the study. Then, a venue, in most cases school halls, was prepared. The selected students were then given an invitation paper describing the purpose of the study, and date, location and time of the of questionnaire administration.

Students who came according to the invitation were seated separately in the auditorium and were given a

briefing on the purpose of the study, the answering procedures, an assurance of anonymity, and ways of returning the completed questionnaires. The questionnaires were then distributed. After filling it in, they sealed it in an envelope and put it in a special box located in the hall for this purpose.

4.9 DATA ANALYSIS

After collection of the questionnaires, the responses were coded on a separate specifically designed coding sheet. The coded data were then analyzed using the EPI-INFO programme (Andrew, 1990). SAS programme (Freeman, 1988) was also used for multivariate analysis using logistic regression. Then, according to a particular variable of interest frequency distributions, chi-square tests and multi variate analyses with logistic regressions were conducted.

4.10 Ethical Considerations

All the participants of this study were explicitly informed of the purpose of the study and that participation is entirely voluntary and it was also explained that they had the right to withdraw at any time and they are also free not to answer any question that they wished no to answer. Confidentiality of their responses was also guaranteed by ensuring anonymity procedures. All these were communicated to the participants verbally at the beginning of questionnaire administration and the participants informed consents to participate was clearly recorded at the front pages of the questionnaires.

5. RESULTS

5.1 Sociodemographic variables of the respondents

A total of 755 (89%) students, 910 (91%) parents and 232 (92%) teachers participated in the study.

For students, the mean age was 14.74 years (SD 5.13). The youngest participant was 12 years old and the oldest was 23 years. Almost an equal number of boys and girls participated in the study, 359 (47.5%) and 372 (49.3%), respectively. Christianity was the predominant religion (85.9%), followed by Islam (6.9%) and others (7.2%). Most of the students were Amharas (56.4%) followed by Oromos (17.0%), Gurage (9.8%) and others (7.2%). 27.9% of the students were ninth graders, 25.7% eleventh graders, 24.6% tenth graders and 20.1% twelfth graders. At the time of the conduct of the study, the parents of 70.6% of the students were still married, 16.3% were widowed, 6.9% divorced and separated, and 6.2% never married (see Table 1).

Regarding the parents, the mean age of the participants was 42.25 years (SD 10.88). The youngest respondent was 20 years and the oldest 104 years. 543 (59.7%) of the parents were females and the rest 367(40.3%) were males. 85.7% were Christians followed by Muslims (7.7%) and others 6.6%. 51.1% were Amharas, 19.5% Oromos, 10.8% Tigrians, 10.3% Gurages, and 8.3% others. 72.2% of the parents were married, 11.8% never married,

10.1% divorced and 0.2% widowed. 15.8% were illiterate, 26.3% had not completed elementary, 12.0% had completed elementary, 7.8% had not completed secondary, 18.6% had completed secondary, 3.2% had not completed university, while 5.6% had completed university. 40.5% of the participants were housewives, 14.5% were involved in trade, 10.7% were either professionals or performed administrative functions, 5.5% performed clerical work, and soldiers and policemen constituted 2.5%; the remaining 12.3% included other job categories. 37.9% had monthly incomes between Ethiopian birr 0 - 100, 22.3% between 101 - 200, 21.8% between 201 - 400, 10.8% between 401 - 800, 3.8% between 801 - 1200 and finally 3.4% earn more than 1201 every month (see Table 1).

The mean age of the teachers who participated in the study was 37.4 years (SD 10.7). The youngest participant was 23 and the oldest 58, years old. 196(84.5%) of the respondents were males and 33 (14.2%) were females. Here also, Christianity was the predominant religion accounting for 90.1%, followed by Muslim 5.2%, and others 2.2%. 52.2% of the teachers were Amharas, 15.1% Oromos, 11.2% Tigrians, 7.3% Gurages and the rest, 12.5% accounted for others. 64.7% of the teachers were married, 28.4% never married, 5.2% divorced and 0.9% were widowed. 59.5% had completed university, 35.3% had not completed university, and 1.7% had completed secondary school.

Regarding their income, 75.4% earn between 401 - 800 birr every month, followed by 16.8% between 801 - 1200, and 3.4% more than 1201

(see Table 1).

Table 1.Social and demographic characteristics of students, parents and teachers who participated in the survey (Addis Ababa, December, 1993).

Socio-demographic characteristics	students N.(%) (n=755)	Parents No.(%) (n=910)	Teachers No.(%) (n=230)
*Age			
10 - 12	2 (0.3)	-	-
13 - 14	74 (9.8)	-	-
15 - 16	280(37.1)	-	-
17 - 18	279(37.0)	-	-
19 - 20	42 (5.5)	-	-
20 - 25	2 (0.2)	-	-
no response	76(10.1)	-	-
20 - 30	-	119(13.1)	15(6.5)
31 - 40	-	354(38.9)	115(49.6)
41 - 50	-	282(31.0)	80(34.5)
51 - 70	-	143(15.7)	10 (4.3)
71 - 90	-	11 (1.2)	-
>91	-	1 (0.1)	-
no response	-	-	12 (5.1)
*Sex			
males	359(47.5)	367(40.3)	96(84.5)
females	372(49.3)	543(59.7)	33(14.2)
no response	24 (3.2)	-	3 (1.3)
*Religion			
Orthodox Christian	629(83.3)	780(85.7)	192(82.7)
Muslim	52 (6.9)	70 (7.7)	12 (5.2)
Protestant	46 (6.1)	26 (2.9)	14 (6.0)
Catholic	13 (1.7)	25 (2.7)	5 (2.2)
Other	9 (1.2)	9 (1.0)	5 (2.2)
No response	6 (0.8)	-	4 (1.7)
*Ethnic group			
Amhara	426(56.4)	465(51.1)	121(52.2)
Oromo	128(17.0)	177(19.5)	35(15.1)
Tigian	73 (9.7)	98(10.8)	26(11.2)
Gurage	74 (9.8)	94(10.3)	17 (7.3)
Other	40 (5.3)	76 (8.3)	29(12.5)
No response	14 (1.8)	-	4 (1.7)
*Marital Status			
Married	533(70.6)**	657(72.2)	150(64.7)
Never married	22 (2.9)	107(11.8)	66(28.4)
Separated	12 (1.6)	-	-
Widowed	123(16.3)	2 (0.2)	2 (0.9)
Divorced	52 (6.9)	92(10.1)	12 (5.2)
No response	13 (1.7)	52 (5.7)	2 (0.8)

N.B. ** Parents of students

Table 1.Cont.

Socio-demographic characteristics	Students No.(%) (n=755)	Parents No.(%) (n=910)	Teachers No.(%) (n=232)
*Family income (birr/month)			
0 - 100	-	345(37.9)	-
101 - 200	-	203(22.3)	1 (0.4)
201 - 400	-	198(21.8)	5 (2.2)
401 - 800	-	98(10.8)	175(75.4)
801 - 1200	-	35 (3.8)	39(16.8)
> 1200	-	31 (3.4)	8 (3.4)
no response	-	-	4 (1.7)
*Profession			
Housewife	-	369(40.5)	-
Commercial	-	132(14.5)	-
Professional/ administration	-	97(10.7)	232(100.0)
Clerical	-	50 (5.5)	-
Manual worker	-	47 (5.2)	-
Driver	-	46 (5.1)	-
Unemployed	-	43 (4.7)	-
Military/police	-	23 (2.5)	-
Student	755(100.0)	11 (1.2)	-
Other	-	92(10.1)	-
No response	-	-	-
*Education level			
9	211(27.9)	-	-
10	186(24.6)	-	-
11	194(25.7)	-	-
12	151(20.1)	-	-
No response	13 (1.7)	-	-
Not educated	-	144(15.8)	-
Elementary incomplete	-	239(26.3)	-
Elementary complete	-	109(12.0)	-
Secondary incomplete	-	71 (7.8)	-
Secondary complete	-	169(18.6)	4 (1.7)
University incomplete	-	29 (3.2)	82(35.3)
University complete	-	51 (5.6)	138(59.5)
Other	-	98(10.8)	7 (3.0)
No response	-	-	1 (0.4)

5.2 Sexual Activity Behaviour of Students

Out of the 755 student respondents 148 (19.6%) admitted to having had a coital experience at least once prior to the conduct of the study. 124 (83.8%) of these were boys while 20 (13.5%) were girls, accounting for 39.8% of the boys and 5.6% of the girls.

of d The earl sexu reported age for girls was fourteen years with mean age of onset being 15.30 years (SD 5.39).

The earliest age of onset of sexual activity for the boys was twelve years with mean age of onset being 16.45 years (SD 4.02).

50% of the sexually experienced girls had their first experience before the age of seventeen years. If we consider this by the various stages in age, by age twelve, only 0.1% were sexually active, by age sixteen, 35.0%, and by age twenty, 100% were sexually active. Again, 50% of the sexually active boys had their experience before the age of seventeen. When this is spread out for the various ages, by age twelve years 0.1% were sexually active, by age sixteen 20.9%, and finally 99.3% were active by age twenty. Both showing an increase in sexual activity pattern as age increases.

Peer pressure was the most often reported factor that led to the first sexual encounter, accounting for 35.2% of the sexually active respondents, followed by being forced (21.6%), alcohol (11.5%) and drugs (10.3%). 27.0% admitted that they first performed sex in hotels, followed by partners' house 20.2%, and own house 20.2%. Hotels are also the most frequent places where the sexually active students had sex after the first sexual

encounter, accounting for 29.1% of the responses.

Regarding the duration of acquaintance with the first sexual partner, 14.9% were acquainted only for hours, 3.0% for less than one week, 18.2% for two or more weeks, 20.9% for many months, and 44.6% for many years.

10.1% of the sexually active students admitted having sex with commercial sex workers. 37.2% of the respondents never changed sexual partner since their first encounter, followed by 18.2% once, 18.2% twice, 5.4% three times, and 12.2% four or more. 61.1% of the students admitted to having had sex within the last three months.

Only 43.2% of the sexually active students knew about condoms on their first coital encounter. 82.4% of them did not use condom on their first sexual encounter. Only 27.7% of the sexually active students claimed that they had continuously used condoms (see Table 2).

52.8% of the parents thought that most high school students are sexually active. A substantial proportion of the parents (40.9%) said that they knew nothing about high school students' sexual behaviours. Also on this issue, 81.5% of the teachers thought that most students are sexually active.

Table 2. Distribution of knowledge and behavioral factors among sexually active students in Addis Ababa, 1993.

Bhavioral factors	Students No.(%)
*Factors which led to the First sexual encounter	
Peer pressure	52(35.2)
Being forced	32(21.6)
Alcohol	17(11.5)
Drug	16(10.8)
No response	31(20.9)
*Knowledge of condom prior to the first sexual encounter	
Yes	64(43.2)
No	66(44.6)
No response	18(12.2)
*Use of condom on the first sexual encounter	
Yes	26(17.6)
No	103(69.6)
No response	19(12.8)
*Continuous use of condom on subsequent encounters	
Yes	41(27.7)
No	81(54.7)
No response	26(17.6)
*Frequency of sexual encounter during the last 3 months	
None	59(39.9)
Once	33(22.3)
Twice	15(10.1)
Three times	9(6.1)
Four or more	6(4.1)
No response	26(17.5)
*Last sexual encounter	
1 - 5 days	18(12.3)
1 - 2 weeks	14(9.5)
3 - 4 weeks	16(10.8)
1 - 3 months	15(10.2)
More than 3 months	59(39.7)
No response	26(17.5)

5.3. Perceptions of Students' Knowledge of AIDS and Condoms

47.2% of the students felt that the majority of the students do not have enough knowledge about AIDS. Only 38.1% of the parents on the other hand felt that a majority of students do not have enough knowledge about AIDS. The majority of teachers (52.2%) thought that most students do not have adequate knowledge about AIDS.

Regarding the source of information about AIDS for students, the majority in all the three categories, 64.1% of the students, 56.2% of the parents and 52.2% of the teachers acknowledged mass media to be the most important source of knowledge about AIDS. The two most commonly reported reasons for their conclusions were: it is always available, and the mass media do broadcast the message about AIDS almost always.

42.4% of the students thought that most students do not know what a condom is, while only 23.8% of the parents and 28.9% of the teachers felt that the majority do not know about condoms. Also, only 42.8% of the students, 38.8% of parents and 34,9% of teachers felt that most students know how to use it properly.

Regarding some of the reasons that the respondents felt prevent sexually active students from using condoms include: for students the two outstanding reasons were negligence (28.2%) and embarrassment in buying from the shops or pharmacy (26.4%); for parents, fear to buy from shops and pharmacies (30.0%) followed by lack of information and knowledge (27.8%); and finally for teachers, lack of information and knowledge (24.1%)

both before and after controlling for the other factors (see Tables 4,5 and 6).

Table 3. Attitude towards students' knowledge, attitude, use of condoms and AIDS (Addis Ababa, 1993).

Attitude	Student No.(%)	Parent No.(%)	Teacher No.(%)
*Students' knowledge of condom			
Most do not know	320(42.4)	217(23.8)	67(28.9)
Most know about condoms	281(37.2)	537(59.0)	136(58.6)
They do not need to know	-	30 (3.3)	-
I do not know	142(18.8)	126(13.8)	26(11.2)
No response	12 (1.6)	-	3 (1.3)
*student use of condoms			
Most know how to use condoms	323(42.8)	353(38.8)	80(34.9)
Most do not know	**149(19.7)**	**318(34.9)**	**110(47.4)**
They do not need to know	-	30 (3.3)	-
I do not know	250(33.1)	209(23.0)	38(16.4)
No response	33 (4.4)	-	3 (1.3)
*Sexually active students need to use condoms.			
Yes	-	689(75.7)	212(91.4)
No	-	99(10.9)	8 (3.5)
I do not know	-	122(13.4)	9 (3.9)
Non respondent	-	-	3 (1.2)
*Why do not sexually active students use condoms ?			
Negligence	213(28.2)	90(10.0)	20 (8.6)
Fear to buy from shops/ Pharmacies	199(26.4)	273(30.0)	43(18.5)
Lack of knowledge and information	74 (9.8)	253(27.8)	56(24.1)
Sexual partner pressure	69 (9.1)	83 (9.1)	42(18.1)
Religious inhibition	38 (5.0)	29 (3.2)	1 (0.4)
Parental fear	17 (2.3)	33 (3.6)	4 (1.7)
It is not easily available	4 (0.5)	14 (1.5)	8 (3.4)
Other	36 (4.8)	37 (4.1)	17 (7.3)
I do not know	92(12.2)	98(10.7)	31(13.4)
No response	13 (1.7)	-	10(4.3)
*Best source of information about condoms			
Mass media	405(53.6)	639(70.2)	131(56.5)
Health professionals	196(26.0)	28 (3.1)	20 (8,6)
Schools	49 (6.5)	128(14.1)	27(11.6)
Friends	34 (4.5)	41 (4.5)	32(13.8)
Other	32 (4.2)	10 (1.1)	5 (2.2)
I do not know	27 (3.6)	50 (5.5)	14 (6.0)
Parents	5 (0.7)	14 (1.5)	-
No response	7 (0.9)	-	3(1.3)

Table 4. Comparison of parents by their attitudes towards the provision of condoms at schools and sociodemographic variables, (Addis Ababa, 1993)

Socio demographic variables	Approved No.(%)	CRUDE OR (95% CI‡‡)	p-value‡‡‡	Adjusted‡‡‡‡ OR (95% CI)
Age group				
20 - 29	80(69.9)	1.00‡		1.00‡
30 - 39	223(67.2)	0.5455(0.30-0.98)		0.5133(0.28-0.95)
40 - 49	163(63.4)	0.5581(0.30-0.99)	0.004	0.4879(0.26-0.92)
50 - 59	59(59.0)	0.490(0.26-0.93)		0.4317(0.22-0.85)
Sex				
Males	221(64.1)	1.00‡		1.00‡
Females	325(65.1)	1.0480(0.79-1.40)	0.804	1.0334(0.75-1.42)
Religion				
Christian	501(65.0)	1.00‡		1.00‡
Muslims	38(59.4)	0.9470(0.82-1.10)	0.444	0.9241(0.78-1.09)
Ethnic Group				
Amhara	291(67.7)	1.00‡		1.00‡
Oromo	99(59.6)	1.3854(0.99-1.94)		1.3446(0.95-1.90)
Tigre	59(66.3)	1.3015(0.78-2.78)	0.535	1.2470(0.74-2.11)
Gurage	53(58.9)	0.9479(0.58-1.56)		0.9965(0.59-1.68)
Other	44(63.8)	2.3161(0.47-11.4)		2.8855(0.54-15.5)
Education				
Illiterate	74(57.4)	1.00‡		1.00‡
Elementary	213(66.4)	1.4658(0.96-2.33)	0.072	1.2816(0.83-1.98)
Secondary	148(64.6)	1.3580(0.87-2.11)		0.9490(0.58-1.55)
Post Secondary	78(66.7)	1.5278(0.94-2.46)		1.4542(0.86-2.45)
Income (birr)				
0 - 100	198(62.5)	1.00‡		1.00‡
101 - 200	117(62.2)	0.9905(0.68-1.44)		1.0288(0.70-1.51)
201 - 400	132(71.7)	1.5256(1.03-2.26)		1.5877(1.04-2.43)
401 - 800	60(65.9)	1.1632(0.71-1.90)	0.550	1.160(0.68-1.97)
801 - 1200	21(60.0)	0.9015(0.44-1.84)		0.8236(0.39-1.74)
≥ 1201	18(62.1)	0.9834(0.45-2.15)		0.9142(0.30-2.12)

N.B. ‡ = Reference category
‡‡ = Confidence interval
‡‡‡ = p-value for trend where appropriate, no major change in p-values were observed even adjusting for the other variables.
‡‡‡‡ = After controlling for the other variables by putting them into the logistic model.

Table 5. Comparison of students by their attitudes towards the distribution of condoms in schools and sociodemographic variables (Addis Ababa,1993).

Sociodemdgraphic Variables	Approved No.(%)	Crude* OR(95% CI**)	p-value***	Adjusted**** OR(95% CI)
Age Group				
12 - 14	36(66.7)	1.00*		1.00*
15 - 17	280(74.9)	1.1124(0.69-1.79)	0.289	1.2855(0.76-2.17)
≥ 18	99(74.4)	1.0875(0.62-1.92)		1.1462(0.59-2.23)
Sex				
Male	252(81.3)	1.00*		1.00*
Female	194(66.7)	0.460(0.31-0.67)	0.00006	0.454(0.31-0.67)
Religion				
Christian	423(74.3)	1.00*		1.00*
Muslim	34(79.1)	0.9416(0.78-1.33)	0.653	0.950(0.77-1.17)
Ethnic Group				
Amhara	270(75.2)	1.00*		1.00*
Oromo	77(73.3)	1.251(0.81-1.94)		1.259(0.79-1.99)
Tigre	48(76.2)	1.320(0.66-2.62)	0.0442	1.389(0.69-2.82)
Gurage	42(75.0)	1.237(0.61-2.51)		1.505(0.70-3.25)
Others	18(62.1)	2.062(0.23-18.2)		2.054(0.22-19.0)
Grade				
9	125(74.4)	1.00*		1.00*
10	124(79.0)	1.215(0.73-2.03)		1.314(0.76-2.26)
11	177(78.3)	0.772(0.48-1.25)	0.246	0.794(0.47-1.38)
12	88(72.1)	0.837(0.50-1.41)		0.922(0.51-1.68)

N.B. * = Reference category
** = Confidence interval
*** = p-value for trend where appropriate, no major change in p-values were observed even after adjusting for the other variables.
**** = After controlling for the other variables by putting them into the logistic model.

Table 6. Comparison of teachers by their attitudes to the distribution of condoms at schools and socio-demographic variables (Addis Ababa, 1993) .

Socio demographic variables	Approved No.(%)	Crude OR(95% CI‡‡)	p-value‡‡‡	Adjusted‡‡‡‡ OR(95% CI)
Age Group				
20 - 29	39(60.0)	1.00‡		1.00‡
30 - 39	93(68.4)	1.4651(0.57-3.77)	0.946	1.692(0.60-4.80)
≥ 40	6(54.5)	2.2817(0.86-6.02)		2.509(0.87-7.24)
Sex				
Males	127(66.1)	1.00‡		1.00‡
Females	15(50.0)	0.6552(0.34-1.27)	0.131	0.693(0.35-1.39)
Religion				
Christian	138(67.3)	1.00‡		1.00‡
Muslim	5(41.7)	0.6972(0.51-0.91)	0.113	0.676(0.50-0.91)
Ethnic Group				
Amhara	76(67.9)	1.00‡		1.00‡
Oromo	21(60.0)	1.5080(0.73-3.11)	0.892	1.160(0.53-2.52)
Tigre	16(64.0)	1.3913(0.50-3.87)		1.126(0.39-3.20)
Gurage	10(58.8)	0.9782(0.32-2.99)		0.789(0.25-2.52)
Others	18(66.7)	1.5652(0.57-4.30)		1.652(0.56-4.85)

N.B. ‡ = Reference category
‡‡ = Confidence interval
‡‡‡ = p-value for trend where appropriate, no major change in p-values were observed even after adjusting for the other variables.
‡‡‡‡ = After controlling for the other variables by putting them into the logistic model.

Table 6. Comparison of teachers by their attitudes to the distribution of condoms at schools and socio-demographic variables (Addis Ababa, 1993) .

Socio demographic variables	Approved No.(%)	Crude OR(95% CI‡‡)	p-value‡‡‡	Adjusted‡‡‡‡ OR(95% CI)
Age Group				
20 - 29	39(60.0)	1.00‡		1.00‡
30 - 39	93(68.4)	1.4651(0.57-3.77)	0.946	1.692(0.60-4.80)
≥ 40	6(54.5)	2.2817(0.86-6.02)		2.509(0.87-7.24)
Sex				
Males	127(66.1)	1.00‡		1.00‡
Females	15(50.0)	0.6552(0.34-1.27)	0.131	0.693(0.35-1.39)
Religion				
Christian	138(67.3)	1.00‡		1.00‡
Muslim	5(41.7)	0.6972(0.51-0.91)	0.113	0.676(0.50-0.91)
Ethnic Group				
Amhara	76(67.9)	1.00‡		1.00‡
Oromo	21(60.0)	1.5080(0.73-3.11)	0.892	1.160(0.53-2.52)
Tigre	16(64.0)	1.3913(0.50-3.87)		1.126(0.39-3.20)
Gurage	10(58.8)	0.9782(0.32-2.99)		0.789(0.25-2.52)
Others	18(66.7)	1.5652(0.57-4.30)		1.652(0.56-4.85)

N.B. ‡ = Reference category
‡‡ = Confidence interval
‡‡‡ = p-value for trend where appropriate, no major change in p-values were observed even after adjusting for the other variables.
‡‡‡‡ = After controlling for the other variables by putting them into the logistic model.

5.4 Attitudes Towards the Provision of Health and Sex Education in Schools

The majority of the students (92.6%), parents (98.7%) and teachers (96.1%) thought that there is an urgent need to start health education in schools. Most parents (41.5%) and the teachers (40.9%) preferred that it should start at the elementary level (1 - 5) while most students (46.8) chose the secondary level (9-12). As to how it should be provided, 37.0% of the students, 57.4% of the parents, and 53.0% of the teachers thought that it should be given as a separate course with its own curriculum.

Considering sex education, again, the majority in all the groups (students - 80.1%, parents - 90.9%, and teachers - 96.1%) felt that sex education should also be provided in schools commencing in the junior secondary grades (7 - 8)(42.0% for parents and 47.8% for teachers) or in the secondary grades (53.8% for students) (see Table 7).

Table 7. Attitudes towards the provision of health and sex education in schools (Addis Ababa, 1993).

Attitude	Students No.(%)	Parents No.(%)	Teachers No.(%)
*Approval of health education provision			
Yes	699(92.6)	898(98.7)	223(96.1)
No	13(1.7)	4(0.4)	1(0.4)
Do not know	37(4.9)	8(0.9)	3(1.3)
No response	6(0.8)	-	5(2.2)
*Grade to commence Health education			
Elementary (1-5)	83(11.0)	378(41.5)	95(40.9)
Junior secondary (7-8)	136(18.0)	234(25.7)	74(31.9)
Secondary (9-12)	353(46.8)	246(27.0)	34(14.7)
Other	80(10.6)	37(4.1)	24(10.3)
Do not know	66(8.7)	15(1.6)	2(0.9)
No response	37(4.9)	-	3(1.3)
*How to provide the lessons			
Separately on its own	279(37.0)	522(57.4)	123(53.0)
Combined with others	151(20.0)	197(21.6)	63(27.2)
As an extra curricular activity	208(27.5)	155(17.0)	36(15.5)
Other	16(2.1)	10(1.1)	7(3.0)
Do not know	62(8.2)	26(2.9)	-
No response	39(5.2)	-	3(1.3)
*Who should provide the lesson			
Teachers	107(14.2)	-	60(25.9)
Health professionals	432(57.2)	-	157(67.7)
Students/AIDS Club members	141(18.7)	-	-
Others	7(0.9)	-	9(3.9)
Do not know	30(4.0)	-	2(0.9)
No response	38(5.0)	-	4(1.7)
*Approval of sex education provision			
Yes	605(80.1)	827(90.9)	223(96.1)
No	40(5.3)	42(4.6)	5(2.2)
No not know	65(8.6)	41(4.5)	-
No response	45(6.0)	-	4(1.7)
*Grade to commence sex education			
Elementary (1-6)	41(5.4)	149(16.4)	34(14.7)
Junior secondary(7-8)	130(17.2)	382(42.0)	111(47.8)
Secondary (9-12)	406(53.8)	282(31.0)	70(30.2)
Other	64(8.5)	38(4.2)	11(4.7)
Do not know	72(9.5)	59(6.5)	2(0.9)
No response	42(5.6)	-	4(1.7)

6. Discussion

This study gives important information regarding the sexual behaviour of students in Addis Ababa, their high risk behaviour, and possible protective measures that could be implemented in an effort help control the spread of AIDS among adolescents.

19.6% of the participating students admitted to having sexual experience accounting for 39.8% of the boys and 5.6% of the girls. These figures are relatively lower when compared with the results of similar studies. In U.S.A and Canada the figures were between 46% - 72% for boys and 24% - 72% for girls (Keagles, 1988; Keagles, 1989; Nickerson, 1990; Kerr, 1991; Grant, 1988;); in Europe it was between 18.9% - 78% for boys, and 17% - 45% for girls (Misfeldt, 1990; Tyden, 1991; Kjoller, 1989); in Latin America 42% - 78% for males, and 12% - 55% for females (Population Reports, 1992); in Africa the figures in general were above 30% (Douglas, 1986; Ayo, 1991; Nicholas, 1987; Abdoolkarim, 1992; Feyisetan, 1989); in Ethiopia in Harar 20% for females, 65% for males (Bisrat, 1992), in Jimma 40% for both sexes (Tesfaye, 1993), Northwest Ethiopia 52.8% for both sexes (Asnake, 1993) and in Addis Ababa 53% for boys and 24% for girls (Gebre, 1990).

The result for the boys was fairly comparable to most of the previous findings. But when compared with the other studies the girls' data appeared to be relatively low. This could probably be due to the cultural influences by, which despite the strong assurance of anonymity, the girls did not provide their true response,

or rather, it may be due to boys being more sexually active and tending to report more frankly.

That boys are substantially more sexually active than girls has been demonstrated by most of the above studies. Also, that there is a tendency for the girls to persistently under-report their sexual behaviour has again been confirmed by some of the studies (Grant, 1988; Misfeldt, 1989). This may have also been the case in this study.

78.6% of the coitally active respondents claimed that their first intercourse was initiated by either peer pressure (35.2%), being forced (21.6%), alcohol (11.5%) or drugs (10.3%) indicating either unplanned encounters or circumstances creating unfavourable situations for making responsible decisions.

36.1% of the sexually active students had had very minimal acquaintance (less than one month in most cases) with the person that they had sex with. An important majority of them (10.1%) admitted to having had sex with a commercial sex worker. 54% of the sexually active students reported also that they had had multiple sexual partners. All the above findings clearly and alarmingly indicate to a prevalent high risk behaviour. This has also been the finding of various other previous investigations (Gebre, 1990; Nickerson, 1990; Keagles, 1988).

Another characteristic feature which makes adolescent sexual activity high risk is their either non or very minimal use of any protective measure, specifically the use of a condom. Only 17.6% of the

sexually active students used condoms in their first sexual encounter, and only 27.7% claimed to have used a condom continuously on their subsequent sexual encounters. Previous similar studies conducted in Kenya, Nigeria and U.S.A also support this finding (Douglas, 1986; Ayo, 1991; Bisrat, 1992; Abdoolkarim, 1992; Keagles, 1988).

Although condoms are available in many places, a substantial number of the sexually active adolescents claimed that they did not know about condoms when they had their first sexual encounter (44.6%). This indicates that information pertaining to condoms is not provided to adolescents early enough, that is when they are at the period of initiation of sexual activities. This was also the attitude of a substantial proportion of students (42.4%) who thought that most students do not have adequate knowledge and information about condoms and AIDS (47.2%) (see Table 3). Other important reasons why students thought condoms were not used include: negligence (i.e. they do not make effort to get them due to preconceived misconceptions that it reduces sensation, or they feel that they are not vulnerable to the disease; moreover some of them think that the disease does not exist at all) and fear of buying condoms from pharmacies and shops (i.e. they think that the elders working in these stores may either not give them, or despise them for asking for it, or they may feel that they may be seen or caught by friends, acquaintances or family members while trying to obtain them).

Parents and teachers also thought that fear of buying from shops and pharmacies (30% and 18.5% respectively) and lack of information and knowledge (27.8% and 24.1% respectively) to be the two outstanding barriers.

This study, therefore, demonstrates that students are sexually active, and that they continue to practise risky behaviours due to either lack of adequate information related to condoms and AIDS or barriers preventing them from easily acquiring condoms when they need them. To improve on this situation two possible intervention measures are possible: bringing about behavioural changes such as either exercising abstinence or, if this is not possible, pushing them to remain steadfast with only one partner, through education, and provide condoms through more accessible and acceptable routes.

Schools are the places where students acquire most of their knowledge. The role schools could play to bring about desired behavioural changes among their pupils is also potentially great. In schools students are provided with information on various aspects of life through well organized and developed instruction methods. This makes schools ideal places to commence and continue educating them on aspects of life. Since issues related to health are also one aspect of life, these should be given due attention and emphasis in the school educational environment if an overall desirable behavioural change is to be anticipated among the learners.

The role schools have played in the provision of information and education on matters related to health has, up to now, been very minimal or nonexistent. This is evident in this study, in that most of the students (53.6%), parents (70.2%) and teachers (56.5%) acknowledged the mass media (rather than schools) as the most important source of information about condoms and AIDS followed by health professionals. Only 6.5% of the students, 14.1% of the parents and 11.6% of the teacher considered schools to be important sources of information for adolescents.

Gebre, (1990) also came up with similar findings in Addis Ababa, in that 63.8% of the students chose mass media to be the best source of information on AIDS and condoms followed by health institutions and professionals. Only 10.3% in his survey chose schools to be the best sources of information. Other studies conducted abroad, on the other hand, indicate that schools rather than mass media to be the major source of information. For example, in Kenya, where there is an elaborate Health Education in schools, students rely more on schools as their most important source of information on AIDS and related matters than mass media. This indicates the potential that schools have in becoming important and reliable sources of information for students on issues related to sexuality and AIDS (Ayo, 1991; Kranisk, 1990).

It is obvious that information provided by the mass media is targeted at the general population and does not particularly address adolescents. It is also fragmented

and lacks continuity. Not all issues pertaining to sexuality, STDs and adolescence are emphasized. In fact students may not understand the message, especially in their earlier years when conceptually they are not well versed on these issues, but in reality there is an urgent need to start the education before they actually become sexually active and risky behaviours become well established.

This is the reason why almost all of the students, parents and teachers look to schools to assume an increased role in the provision of health education for adolescents. The vast majority of students, parents and teachers felt that there is a need to commence health education immediately. Moreover, most of the teachers and the parents preferred that health education start at the elementary level, while most of the students felt that it is better to start it in high schools, Moreover most parents, teachers and students also felt that it is better if health education is provided in schools as a separate course having its own curriculum.

Teachers and similarly, most students wanted health professionals to assume an important role in the provision of health education in their schools. A vast majority of the teachers also approved the incorporation of health and sex education in the teachers' training curricula.

Regarding sex education, the majority of the students (80.1%), parents (90.9%) and teachers (96.1%) felt that there is a need to start sex education. Parents (42.0%) and teachers (47.8%) felt that junior secondary

grades (7-8) are better places to start sex education, while students (53.8%) preferred secondary grades. This study, therefore, has quite strongly demonstrated that there is a strong desire by the participants for health and sex education to start in schools, with many of the parents and teachers desiring that it start even at earlier grades.

Studies conducted here in Ethiopia and abroad also came up with similar findings that the general public and students themselves wanted more such education.

This is, therefore, an indication of one area that policy developers and higher education and health officials need to address and come up with strategies to fulfil the desires of the general population.

Besides the provision of education another equally important intervention possibility that needs to be given similar attention is the provision of condoms in schools. This is not only to protect students from acquiring AIDS but also from other STDs and unwanted pregnancies.

It has been described in detail above that despite their availability elsewhere, sexually active adolescents do not use condoms as hoped. This obviously led us to look for more accessible and effective ways of providing them, like in the schools.

This is because at least a substantial proportion of adolescents are present in schools particularly in urban settings. Therefore, if condoms are made accessible to them in schools, this may relieve them from the fear of buying condoms from other exposing places, which was shown in this study to be one of the major obstacles.

Another equally important issue that should be given due attention, if increased condom provision is anticipated, is the presupposition that the public may fear that it might promote promiscuity and therefore not accept this idea. No study has substantiated this, and in fact, most studies conducted in this area have recommended the provision of protective measures. This is also what is strongly recommended by the WHO (Global AIDS News, 1993; G/Kidan, 1993; Kjoller, 1989; Kerr, 1990; Kerr, 1991; Mbizvo, 1991;).

Therefore, since no study has been previously conducted in Ethiopia that assessed what parents (who are thought to be the prime sources of opposition), students and teachers felt towards the distribution of condoms in schools, this study makes an initial contribution. It shows that 60.0% of parents, 61.6% of teachers and 61.3% of students support the distribution of condoms in schools.

This might come as a surprise. But, in a strongly cultural, religiously dominated and more traditional country, coming up with such a finding may suggest the following: first, it may indicate that the population is becoming more aware of the consequences of AIDS and is gradually accepting whatever measures it has to take to stop the spread even if it is entirely against its traditional beliefs; and secondly, it may also suggest that modernization is gradually eroding the traditional cultural values. Or on the contrary, this study, since it was conducted in an urban setting (where the population appears to be culturally liberal) may not reflect the

true feelings of the general (mostly rural) population. A change in the traditional values for parents is also suggested by the finding in this study through stratified analysis that indicated a decreasing trend to accept this idea as age increases.

6.1 Limitations of this study

In a study such as this it is very difficult to assess or confirm the validity of the participants' responses. Spontaneity, though, of the questionnaire administration (i.e. no information on the conduct of the study was provided in advance), has helped to reduce the possible causes of response bias, such as through cross discussions between the respondents had notices been given in advance.

It might be observed that in the parents' sample there is a slight majority of females. This happened because accuracy and dependability of responses were given more emphasis than equal gender representation which was found to be difficult to attain. To elaborate further, during the data collection phase it was difficult, upon repeated visits, to find the male parents since they were most of the time not available due to occupational commitments (if unavailable after three visits we labelled them as missing). If, on the other hand we were to leave the questionnaires at home, we would have chanced them being filled in by either a different person (mostly the children) or through discussions with the other family members. In both cases thus may not reflect the true parental attitude and, thereby, threaten the validity of the responses.

Another limitation of this study would be its generalizability to rural settings. The fairly large sample sizes in all the three categories and also the random selection resulted in a fairly comparable composition to that of Addis Ababa's population composition (Central Statistics Office, 1987), thereby making the results quite generalizable to at least urban settings. But its generalizability to rural settings is duly acknowledged and it is recommended that similar surveys be conducted in rural settings.

7. CONCLUSIONS

This study has demonstrated that many adolescent students in Addis Ababa high schools are sexually active. Not only are they sexually active, but they exercise risky sexual behaviours, despite large mass media campaigns about AIDS and its consequences and the availability of condoms.

Most students, parents and teachers were not found to be fully confident of students' knowledge about AIDS and condoms. An overwhelming majority of the students, parents and teachers supported the idea of immediate commencement of health and sex education in schools. A substantial proportion of them also approved the promotion and distribution of condoms in high schools.

Therefore the conclusion generally is that the population in general and policy makers in particular could no longer continue to ignore the issue of steadily growing and alarming risky sexual behaviour of adolescents. This, therefore, indicates for an urgent implementation of comprehensive education and prevention programmes.

8. RECOMMENDATIONS

It is therefore recommended from this study that:

1. Immediate and strong efforts should be made by education and health policy makers to institute and commence health and sex education into the regular teaching/learning process.
2. A follow-up study be conducted to further investigate and identify the most acceptable and feasible ways of condom distribution in schools followed by implementation.
3. Similar surveys be conducted in rural settings to complement to this study and obtain more general views of the situation all over the country.

REFERENCES

Abdoolkarim S.S., Q. Abdoolkarim, E. Preston-whyte and N. Sankar, "Reason for lack of condom use among high school students," SAMJ. 1992; 82: 107-110.

AIDS QUICKIE, Market of opinion research international (MORI). 1986: 27-29.

AIDS/STD National School Health Education Proposal, June 1990.

Allen S., "Confidential HIV testing and condom promotion in Africa," JAMA. 1992; 268(23): 3338-3343.

Andrew G.D., J.A. Dean, H. Anthony and R.C. Dicker, A Word Processing, Database, and Statistics System for Epidemiology on Microcomputers, EPI INFO - Version 5, 1990.

Asnake H., L. Tesfaye, N. Cherinet, A. Betelihem, G. Edom, T. Taye and F.Dejene, "Knowledge, Attitude and Practice on HIV/AIDS among pupils of a rural high school in north western Ethiopia, 1993.

Ayo A.A., T.M. Leah, M. Janile and M.P. John, "Adolescent sexuality and fertility in Kenya:a survey of knowledge, perceptions and practice," Studies in Family Planning. 1991; 22(4): 205-216.

Becker M. and J. Joseph, "AIDS and Behavioural change to reduce risk: A review," AJPH. 1988; 78:394-410.

Bisrat F., "KAP study in Harar town high school students on family planning," Thesis Publication, Addis Ababa University. 1992: 1-4.

Boyer C.B. and S.M. Keagles, "AIDS risk and prevention among adolescents," Soc. Sci. Med. 1991; 33(1): 11-23.

Cernada G.P., M. Chang, H. Lin, T. Sun and C.C.Cernada, "Implications for adolescents sex education in Taiwan," Studies in Family Planning. 1986; 17(4): 181-187.

Douglas N., O.A. Ladipo, M.P. John and E.O. Otolorin, "Sexual behaviour, contraceptive practice and reproductive health among Nigerian adolescents," Studies in Family Planning. 1986; 17(2): 100-106.

Freeman G.C., W.C. Kelly, Software System for Data Analysis, SAS/STAT user's guide, release 6.03 edition, SAS Institute Inc., 1988.

Freudenberg N., "Presenting AIDS: A guide to effective education for the prevention of HIV infection," American Public Health Association. 1989: 154.

Feyisetan B. and A.R. Pebley, "Premarital sexuality in urban Nigeria," Studies in Family Planning. 1989; 20(6): 343-354.

Gebre S., "Sexual behaviour and knowledge of AIDS and other STDS: A survey of senior high school students," EJHD. 1990.

Global AIDS News, "Sex education leads to safer behaviour," 1993; No.4:1-2.

Gebre Kidan K. and B. Azeze, "A survey of condom use among college students," June 1993.

Grant L.M. and E. Demetrion,"Adolescent sexuality, " The Paediatric Clinics of North America. 1988; 35(6): 1271-1287.

Gruen S.M., E. Hays and R. Fritsch-deBruyn, "Setting up a school-based sexual education programme to help prevent AIDS and other STDS," Nurse - pract. 1991; 16(8): 47-48, 50-51.

Hastings G., D. Leather and A. Scott, "AIDS publicity: Some experience from Scotland," British Medical Journal, 1987; 294: 48-49.

Hein K., "Commentary on adolescent Acquired Immunodeficiency Syndrome: The next wave of the HIV epidemic?" The Journal of Paediatrics. 1989; 114(1): 144-149.

AIDS education for school age population, HYGIE. 1988; Vol. iii(3): 5.

Kapila M., "An International perspective of the impact of AIDS and National AIDS education programmes," HYGIE. 1990; Vol. IX(4):8-12.

Keagles S.M., N.E. Adler and C.E. Irwin, "Sexually active adolescents and condoms: Changes over one year in knowledge, attitudes and use," AJPH. 1988; 78(4): 460-461.

Keagles S.M., N.E. Adler and C.E. Irwin, "Adolescents and condoms," AJDC. 1989; 143: 911-915.

Kerr D.L., "Condom Vending machines in Canada's secondary schools," Journal of School Health. 1990; 60(3): 114-115.

Kerr D.L., "Condom availability in New York city schools," Journal of School Health. 1991; 61(6): 269-270.

Kjoller S., B. Hansen and E. Segest, "Free condoms in the schools of Copenhagen, Denmark," Journal of School Health. 1989; 59(2): 66-68.

Koetswang S., "Adolescent reproductive health," Health Care of Women and Children in Developing Countries. 1990: 491-503.

Kranisk A. and M. Wangel, "AIDS and Danish adolescents; Knowledge, Attitude and Behaviour relevant to the prevention of HIV infection," Danish Medical Bulletin. 1990; 37(3): 257-259.

Mbizvo M.T., "Condom acceptance and HIV prevention in reproductive health: The challenges," Central African Journal of Medicine. 1991; 37(12): 419-427.

McEwam B., "High school students' attitude towards use of contraceptives,"New Zealand Medical Journal. 1988; 101: 142-145.

Merson M.H., "Global AIDS prevention and control," HYGIE. 1990; Vol.IX(4): 5-7.

Misfeldt J.C., L. Werdelin, F. Senderovitz, M.Melby and J. Olsen, "The sexual habits of young Greenlanders and their knowledge of AIDS. A study done among students in vocational schools in Greenland in 1989," Abstract: Ugeskr - Laeger. 1990; 152(4): 237.

Moore J.R., L. Daily, J. Collins, L. Kann, M. Dalmot, B.I. Truman and L.J. Klobe, "Progress in efforts to prevent the spread of HIV infection among youth," Public - Health Rep. 1991; 106(6): 678-686.

Morlet A. and J. Guinan, "Continued risk taking behaviour and sero-conversion in HIV antibody tested individuals," Counselling Psychology Quarterly. 1989: 2: 7-13.

Mouli V.C., "Bridges crossed yesterday, peaks to be conquered tomorrow," Africa Health. July 1992; 12-14.

National AIDS Control Programme of the Ministry of Health," AIDS case surveillance in Ethiopia: June 30, 1993,"The Ethiopian Journal of Health Development. 1993; 7(1): 33-42.

National AIDS control Programme of Ethiopia - Second Medium Term Plan 1992 - 1996 and work plan and Budget for 1992 - 1993.

Nickerson A.E.C., "The Attitude/Behavioural discrepancy as a methodological artifact: comments on sexually active adolescents and condoms," AJPH. 1990; 80(10): 1174-1181.

Nicholas D., T.W. Emile, S.G. Deborah and J. Sherman, "Sexual behaviour, contraceptive practice and reproductive health among Liberian adolescents," Studies in Family Planning. 1987; 18(3): 169-176.

Pitts M.K., D. Wilson, K.C. Phillips, D.G. White and Y. Shorrocks, "A survey of Knowledge, attitude and risk estimates concerning HIV in o Zimbabwean student sample," Health Education Research. 1989; 4(3): 285-295.

Population and housing census of Ethiopia, 1984, Analytic report on results for Addis Ababa, Office of the Population and Housing Census Commission, January 1987; Vol.1(1).

Population Reports, "Young adults reproductive health survey results:Youth in Latin America and Caribbean," 1992; Volxx(4): 28-29.

Population Reports,"Age at marriage" 1992; Vol.xx(4): 25-29.

Rosenfield R. and M.F. Fatallah, "Adolescent Sexuality and Pregnancy," FIGO (International Federation of Obstetrics and Gynaecology) Manual of Human Reproduction, Reproductive Health Global Issues, 1990; Vol 3: 100-121.

Salt H., M. Boyle and J. Ives, "HIV prevention: Current health promoting behavioural models for understanding psychosocial determinants of condom use," AIDS Care. 1990; 2(1): 69-75.

Sherr L., "An evaluation of the UK. government health education campaign," Psychology and Health. 1987; 1: 61-72.

Tesfaye S., D.Sileshi and S.Meseret, "Contraceptive, Demographic and sexual behaviour of high school students in Jimma, South Western Ethiopia, " 1993.

Torantolo D., J. O'malley and J. Mann, "The HIV/AIDS pandemic and the global response," HYGIE. 1993; Vol. XII(2): 5-8.

Tyden T., L. Nordan and L. Ruusuvaara, "Swedish adolescents knowledge of STDS and their attitude to the condom," MIDWIFERY. 1991; 7: 25-30.

Williams G. and S. Ray, "Work place - based AIDS initiatives in Zimbabwe," Work Against AIDS. 1993; 1.

APPENDIX A: SELF-ADMINISTERED QUESTIONNAIRE FOR STUDENTS

INTRODUCTION

The purpose of this study is to assess the attitude of high school students towards the provision of health education, sex education and also on issues related to AIDS and sexual activity patterns.

Since the outcome of this study is very important in determining future decisions regarding high school students' health, we request your genuine and entirely personal attitudes and reflection of experiences on the various issues.

We acknowledge that a lot of very personal areas will be probed by the questionnaire. But since all are vital to the final recommendations, we would like to ask again and again your cooperation to freely and openly give us your genuine responses.

Regarding confidentiality, the whole process of questionnaire administration is set up in such a way that utmost secrecy is maintained. Therefore, please DO NOT WRITE YOUR NAME OR ADDRESS ON ANY OF THE QUESTION PAGES. After you have completed the questionnaire YOU ARE ALSO REQUESTED TO PUT THE QUESTIONNAIRE IN THE PROVIDED BOX AFTER HAVING IT SEALED IN THE PROVIDED ENVELOP.
All this is to guarantee that nobody can be traced in any form whatsoever and ASSURES COMPLETE CONFIDENTIALITY.

CONSENT IDENTIFICATION AREA

PLEASE MAKE A (X) MARK TO SHOW YOUR COMMITMENT TO PARTICIPATE IN THE STUDY.

1. I have read and understood all instructions and confidentiality procedures and I on my own free will consent to participate _____ [ ]

2. I have read the instructions but I AM NOT WILLING TO PARTICIPATE _____ [ ]

APPENDIX A: SELF-ADMINISTERED QUESTIONNAIRE FOR STUDENTS

INTRODUCTION

The purpose of this study is to assess the attitude of high school students towards the provision of health education, sex education and also on issues related to AIDS and sexual activity patterns.

Since the outcome of this study is very important in determining future decisions regarding high school students' health, we request your genuine and entirely personal attitudes and reflection of experiences on the various issues.

We acknowledge that a lot of very personal areas will be probed by the questionnaire. But since all are vital to the final recommendations, we would like to ask again and again your cooperation to freely and openly give us your genuine responses.

Regarding confidentiality, the whole process of questionnaire administration is set up in such a way that utmost secrecy is maintained. Therefore, please DO NOT WRITE YOUR NAME OR ADDRESS ON ANY OF THE QUESTION PAGES. After you have completed the questionnaire YOU ARE ALSO REQUESTED TO PUT THE QUESTIONNAIRE IN THE PROVIDED BOX AFTER HAVING IT SEALED IN THE PROVIDED ENVELOP.
All this is to guarantee that nobody can be traced in any form whatsoever and ASSURES COMPLETE CONFIDENTIALITY.

CONSENT IDENTIFICATION AREA

PLEASE MAKE A (X) MARK TO SHOW YOUR COMMITMENT TO PARTICIPATE IN THE STUDY.

1. I have read and understood all instructions and confidentiality procedures and I on my own free will consent to participate _____ [ ]

2. I have read the instructions but I AM NOT WILLING TO PARTICIPATE _____ [ ]

SELF ADMINISTERED QUESTIONNAIRE
STUDENTS

No.	QUESTIONS	Coding category
101	Age	In years [ ]
102	sex	Male 1 [ ] Female 2 [ ]
103	Religion	Orthodox Christian 1 [ ] Catholic 2 [ ] Protestant 3 [ ] Islam 4 [ ] Other/specify/_____ 5 [ ]
104	Grade Level	9 [ ] 10 [ ] 11 [ ] 12 [ ]
105	Ethnic group	Oromo 1 [ ] Amhara 2 [ ] Tigre 3 [ ] Gurage 4 [ ] Harari 5 [ ] Other/specify/_____ 6 [ ]
106	Parents marital status	Married 1 [ ] Never married 2 [ ] Divorced 3 [ ] Widowed 4 [ ] Separated 5 [ ]
107	Have you heard of condoms ?	Yes 1 [ ] no 2 [ ]
108	Where did you get your first information about condoms ?	From teachers 1 [ ] From mass media 2 [ ] From Fellow friends 3 [ ] From health Professionals 4 [ ] From parents 5 [ ] Never heard of condoms 6 [ ] Other/specify/_____ 7 [ ]
109	How old were you when you first heard about condoms ?	Years [ ] Never heard of condoms 99 [ ]

110	If for whatever reason you were to use condoms, do you think you could use them properly?	Yes 1 [ ] No 2 [ ] Don't know 3 [ ]
111	Do you think most high school students are well informed about condoms/	Yes 1 [ ] No 2 [ ] Don't Know 3 [ ]
112	From where do you think high school students obtain most of their information about condoms?	From their teachers 1 [ ] From their friends 2 [ ] From their parents 3 [ ] From the mass media 4 [ ] From Health professionals 5 [ ] Other/specify/_____ 6 [ ] Don't Know 7 [ ]
113	Why do you think you chose in Q. 112 is most frequent source of knowledge about condoms	_____ _____ _____ _____ _____ [ ]
114	If sexually active students don't use condoms, what do you think is their <u>one</u> most important reason?	They don't have information about condoms 1 [ ] Pressure from sex partners 2 [ ] Pressure from parents 3 [ ] Religious 4 [ ] Being afraid to buy from shops/pharmacy 5 [ ] Condom isn't available 6 [ ] Neglect 7 [ ] Other/specify/_____ 8 [ ] Don't Know 9 [ ]
115	If condoms were to be distributed at schools would you approve of it?	Yes 1 [ ] No 2 [ ] Don't Know 3 [ ]

117	If condoms were to be distributed at schools, how should they be distributed?	By teachers 1 [ ] At school clinic 2 [ ] By students/AIDS/first aid club members/ 3 [ ] By school counsellors 4 [ ] By school installed condom vending machines 5 [ ] Should never be distributed 6 [ ] Other/specify/--------- 7 [ ] Don't know 8 [ ]
118	Who do you think should possess condoms?	Male students only 1 [ ] Female students only 2 [ ] Both male & female students 3 [ ] None should have condoms 4 [ ] Don't know 5 [ ]
119	If condoms were to be provided to students what should their price be?	Freely 1 [ ] Five cents only 2 [ ] Ten cents only 3 [ ] Fifteen cents only 4 [ ] Twenty or more cents 5 [ ] Should never be sold to students 6 [ ] Don't know 7 [ ]
120	If you approve of the distribution of condoms at schools what is your <u>one</u> most important reason?	_____ _____ _____ _____ [ ]
121	Do you think <u>most</u> high school students are well informed about condoms?	Yes 1 [ ] No 2 [ ] Don't know 3 [ ]
122	From where do you think high school students obtain most of their information about AIDS?	From teachers 1 [ ] From their friends 2 [ ] From their parents 3 [ ] From Health

SELF-ADMINISTERED QUESTIONNAIRE
STUDENTS

124	How old were you when you had your first sexual relationship?	Age in years 1 [ ] I never had relations 2 [ ]
125	For how long did you know your first sexual partner?	Hours 1 [ ] less than one week 2 [ ] 2 - 4 weeks 3 [ ] Months 4 [ ] I had no relations 5 [ ]
126	Was your first sexual relation prompted by alcohol?	Yes 1 [ ] No 2 [ ] I had no relations 3 [ ]
127	Was your first sexual relation prompted by drugs?	Yes 1 [ ] No 2 [ ] I had no relations 3 [ ]
128	Did your friends pressure you to have your first sexual relation?	Yes 1 [ ] No 2 [ ] I had no relations 3 [ ]
129	Were you forced into having your first sexual relation?	Yes 1 [ ] No 2 [ ] I had no relations 3 [ ]
130	Where did you have your first sexual relations?	At your home 1 [ ] At your partner's home 2 [ ] In hotel 3 [ ] At school 4 [ ] In the park 5 [ ] In the car 6 [ ] Other/specify/_____ 7 [ ] I had no relationship 8 [ ]
131	Where do you commonly have your sexual relationship?	At your home 1 [ ] At your partner's home 2 [ ] In hotel 3 [ ] At school 4 [ ] In the park 5 [ ] Other/specify/_____ 6 [ ]

DECLARATION

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

Name Fisseha Eshetu

Signature

Place Addis Ababa

Date of submission July 20, 1994

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

Dr. David Zakus

Advisor