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PERCEIVED SUFFICIENCY AND USEFULNESS OF IEC MATERIALS AND METHODS ON HIV/AIDS AMONG HIGH SCHOOL YOUTH IN ADDIS ABABA

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DEDICATION

This thesis is dedicated to Mieraf, Betel and Elroei Dechassa.

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LIST OF ABBREVIATIONS

A.A.	-	Addis Ababa
AAU	-	Addis Ababa University
AIDS	-	Acquired Immunodeficiency syndrome
ANOVA	-	Analysis Of Variance
Arcs	-	Anti AIDS Clubs
DCH	-	Department of Community Health
FHI	-	Family Health International
FOM	-	Faculty Of Medicine
HIV	-	Human Immunodeficiency Virus
IEC	-	Information Education Communication
KAP	-	Knowledge -Attitude -Practice
MOH	-	Ministry of Health
PLWHAS	-	People living with HIV/AIDS
PSU	-	Primary Sampling Unit
SPSS	-	Statistical package for Social Scientists
TV	-	Television
UNAIDS	-	Joint United Nations Program on HIV/AIDS

ABSTRACT

Information on the perception of youth about HIV/AIDS IEC messages and materials is meager in Ethiopia. This cross sectional survey was conducted from November 2001 to April 2002 in randomly selected high school students in Addis Ababa, Ethiopia. The objective was to assess the perceived sufficiency and usefulness of HIV/AIDS IEC messages and materials as well as to identify their preferences. Data were collected using a pre-tested anonymous self-administered questionnaire and focus group discussion. A total of 901 high school students from 23 schools participated in the survey. Of these, 464(51.7%) were females. All the study subjects have heard of AIDS. The most common sources of information about HIV/AIDS were radio 628(69.7%), television 516(57.3%), Anti AIDS Clubs 497(55.2%), family members 481(53.45) health professionals 438(48.6%) religious leaders 405(45%) and friends 307(34%).

IEC on HIV/AIDS was perceived useful in influencing knowledge, attitude and practice by 761(85.4%), 704(78.1%) and 676(75%) students respectively and efforts were perceived sufficient to affect knowledge by almost half of the respondents 456(50.6%). On the contrary, the majority of students perceive that IEC messages and materials were not sufficient enough to trigger proper attitude 544(60.4%) and acquire/maintain safe practices 519(57.6%). On top of that, none of the information sources were regarded as highly credible in the face of their audiences and, none of the messages delivered were rated as highly understandable, appropriate, timely,

practically applicable, accessible and compatible with the needs and expectations of youth.

Although, no information source was highly preferred, mass media, health professionals, religious leaders, family and Anti AIDS Clubs were the top five sources chosen. Appropriate information and education about all aspects of HIV/AIDS and life skill training were the content liked better to be transmitted through drama, school lesson, and discussion. The preferred time to be taught by radio/TV is evening after 8.00 pm and Saturday and Sunday afternoon.

In conclusion, HIV/AIDS IEC messages and materials were only able to acquaint students with the disease rather than equipping them with the necessary domains relevant to their day-to-day life. Therefore, coordinated, purposeful, appropriate, and mutually reinforcing IEC messages with emphasis on life skill training are recommended.

I. INTRODUCTION

HIV/AIDS has been and continues to be a scientific, psychosocial, health and development challenge. Despite a great deal of efforts, curative medicine and efficacious vaccine for the problem remain elusive. Although life prolonging treatment with antiretroviral therapy are available they are expensive, difficult to administer and have severe toxic effects(1,2). Therefore, primary prevention through the provision of information, education and communication (IEC) to modify behavior remains a top public health priority.

In response to this, countries including Ethiopia devised strategies and designed programs to provide IEC services to their citizens (3-6). Nonetheless, in spite of long years of IEC implementation the virus continues to spread very fast, causing 16,000 new infections a day (5-8). Amidst of all HIV/AIDS threatened the life and health of youth in Sub Saharan Africa. According to UNAIDS at the end of 2001, an estimated 40 million persons were living with HIV/AIDS globally, of these 70% were from Sub-Saharan Africa and about one-third of the infected people were between the ages 15-24. Every minute six people under the age of 25 years are infected with the virus. AIDS has become the leading cause of death in Sub-Saharan region and the fourth biggest killer in the world (5-8).

Ethiopia is one of the countries highly affected by the HIV/AIDS epidemic. Nine percent of the global infections are estimated to be found in this country (9). Ethiopia has the third largest number of people living with HIV/AIDS next to South Africa and India (10). It is reported that 10.6% and 17% of the Ethiopian and Addis Ababa population, respectively, are infected with HIV, and almost all will probably die of AIDS within the next 10 years. The majority of them acquired the infection through heterosexual intercourse before the age of 30 (11,12). Furthermore, the distribution of the syndrome in the general population shows that the peak ages of new infections are between 15-34 years (11,12).

The vulnerability of youth to HIV infection and the actual threat of the AIDS epidemic to the health and well being of young people in Ethiopia are well recognized. Early sexual maturation coupled with unmet information needs, has exposed contemporary youth to greater health hazards than their predecessors (11-14). They lack the family life education from primary and secondary socializing agents and institutions. As a result, they learn all the goods and evils of life by trial and error (13,14). In addition, the weakening of the traditional social system and changes in values through generations has limited the effect of traditional norms on sexual behavior. Moreover, peer pressure is thought to be one of the factors leading to undesired sexual behavior (14). Thus, one or more of these may predispose youth to health hazards including HIV/AIDS.

HIV/AIDS related IEC programs in Ethiopia were launched in 1987 under the umbrella of the Ministry of Health (MOH). Since its establishment, different governmental and non-governmental organizations were involved to realize its objectives (4). National HIV/AIDS policy was formulated in August 1998, in which IEC was one of the major components (3). IEC activities in Addis Ababa were organized by the Addis Ababa City Administration Anti-HIV /AIDS Networking Group, which was composed of 40 NGOs, six governmental, a few private health related organizations and six zonal net- working groups. One of the priority areas of this group was to increase the awareness of people and to help develop more responsible sexual behavior through mass media and interpersonal communication (11). Recently, this responsibility was handed over to the Addis Ababa HIV/AIDS Prevention and Control Secretariat.

According to an assessment of IEC effort, it was revealed that the IEC intervention to date have been effective in increasing awareness about the existence of AIDS, its main characteristics and transmission methods (12-16). On the contrary, studies have identified severe deficiencies of IEC efforts. First, certain vulnerable groups such as youth remain relatively ignorant of the syndrome. Second, there are still misconceptions and misunderstandings about the modes of transmission of HIV/AIDS. Third, IEC, interventions have not yet successfully been able to bring about the desired behavioral change (9,13,14,15,16,17,18,19).

In the other vein, although changing youth behavior is easier when the message delivered is congruent with the motives and goals of young people, most HIV/AIDS IEC efforts were provider oriented and suffering from the “fallacy of empty vessel“(9,20). As a result, little attention was given to the needs, wants, concerns, interests, opinions, values, attitudes, beliefs and expectations of young people in the design, implementation and evaluation of IEC efforts. Furthermore, studies regarding the perception of youth about the achievement of HIV/AIDS IEC messages and materials are meager in Ethiopia.

Considering the above fact and that the prevalence of high risk behaviors being high compared to the long years of IEC activities by large reflect some deficiencies in the on-going IEC efforts. Therefore, it is timely to assess what the users of these IEC interventions, perceive about their use and effect on them. Moreover, there is a need to assess the preference and needs of youth with regard to the IEC interventions.

Thus, the purpose of this study is to assess the perceived sufficiency and usefulness of IEC Interventions on HIV/AIDS, reported knowledge, attitude, practice, behavior, and preferences of high school youth. So that appropriate strategies can be devised, and the need of the youth can be addressed and there by the gap between knowledge and practice can be narrowed.

2. LITERATURE REVIEW

Youth ages 15-24 number more than 1 billion, comprise nearly one-fifth of the world population. Youth is a concept that could be viewed from both perspectives: as a biologically determined age category and a socio-cultural phenomenon characterized by the need to prepare for performing certain roles. It is a transition from dependent child hood to self reliant adulthood. Although, they are beginning to develop the ability to think critically and to plan the future most young adults reach sexual maturity before they attain emotional or social maturity(1).

2.1. THE GLOBAL PICTURE OF HIV/AIDS

AIDS was first recognized in 1981 among homosexual men in the USA. The etiologic agent HIV had been identified by 1983. In the mid-1980s it became clear that the virus had exploded largely unnoticed throughout the world and that its effect reached a pandemic proportions (21).

The spread of HIV appears to have commenced in the late 1970s or early 1980s in the America, Australia and Western Europe primarily in homosexuals or bisexual men and injecting drug users in certain urban areas: and in parts of the Caribbean and East and Central Africa among men and women with multiple sex partners (22).

Two decade after HIV/AIDS emerged as a new virus; it has now reached almost every country of the world. As of December 2001, more than 60 million HIV infections are estimated to have occurred since the beginning of the pandemic. Ninety five percent of people with HIV/AIDS live in developing countries, where the ability to provide prevention, treatment and care is limited (5,6,8,23). Africa is by far the most severely affected continent and is home to 70% of the adults and 80% of the children living with HIV in the world. This region has buried three quarters of the more than 20 million people worldwide who have died of AIDS since the epidemic began (5,6,8,24). An estimated 3.4 million new HIV infections have occurred in 2001 in sub-Saharan Africa. The United States Bureau of census has predicted that by the year 2010, 8 to 31 years of life will have lost in those countries most affected by HIV/AIDS in Sub –Saharan Africa (22,23,25).

In Ethiopia, the first evidence of HIV was found in 1984 and the first AIDS cases were identified in 1986. Since then in urban areas, more than one out of six adults is infected. Ninety percent of the reported cases occur in the most economically productive age group that is, between the ages of 20 and 49 years(4,26).

2.2 IEC ON HIV/AIDS IN ETHIOPIA

Realizing the devastating and tragic effect of AIDS in all sectors of human development, the Ethiopian Government established a National Task Force on the Prevention and Control of HIV Infection, prior to the reporting of the first AIDS cases in 1985. The task force in collaboration with experts from the global program on AIDS formulated the short and medium term plans for the prevention and control of AIDS in 1987(4).

In 1987 the National AIDS Control Program was launched within the MOH at a departmental level with six divisions: IEC, surveillance and research, clinical aspects of AIDS, Laboratory and blood transfusion, Sexually Transmitted Diseases (STD) and Administration (4).

The HIV/AIDS IEC division focused on prevention strategies and was responsible to:

- develop an effective mechanism enhancing inter- sectoral collaboration for the sustained implementation of IEC activities,
- Organize and coordinate smooth dissemination of AIDS educational Information through Mass Media and Interpersonal route,
- Plan and coordinate research undertakings related to IEC activities,
- Collect pertinent IEC information on a systematic basis, and compile for Interpretation

- Prepare and submit reports to the concerned bodies according to the plan.

2.3 EMPIRICAL FINDINGS ON THE USEFULNESS AND SUFFICIENCY OF HIV/AIDS IEC EFFORTS

The intent of IEC sources, messages and channels are influencing the behavior of the receiver. The receiver is a social, psychological, spiritual and biological being. All these components play an important role in the behavior of an individual. Particularly those who are in their awakening stage because of their inability to balance these composition are facing disequilibrium and are prone to various threats including HIV/AIDS. Thus, IEC messages should address these constituents of youth (27).

Young adults form one of the largest groups with unmet informational needs. They need to be able to protect themselves from HIV/AIDS. Unfortunately, they often face these risks on their own. In many parts of the world, traditional family and community support is no longer available or has been unable to cope with rapidly changing realities. IEC measures have not yet filled the gap. Youth are marginalized and disempowered within society and treated with a lack of respect for their individual capacity and competence. Although, AIDS prevention strategies recognize the vital importance of young peoples access to information it is often withheld intentionally or omitted because of adult fears, lack of experience and knowledge(28,29). Youth need appropriate and practical messages at every stage of development to cope with the changes they are experiencing. Too often they receive confusing messages about sexuality (29-32).

Targeting specific audiences is crucial to the success of IEC programmes. Because, not all messages appeal equally to everyone IEC interventions should be need based, planned, consistent and mutually reinforcing. The extent of learning is greatly influenced by the audience's willingness to learn, and by what the learner brings to the learning situation. For learning will be facilitated or hindered by the subject's previous learning, the learners basic motivation for learning, the audiences frame of reference and the subjects personal maturity and adjustment. The nature of communication and the credibility of the source must also be factored into the equation to effect safe behavioral practices (20).

Individuals level of learning increase as learning occurs in the cognitive, affective and action domains. On the top of that, IEC should go beyond acquaintance level of learning in each domain. Awareness of AIDS is a superficial measure of knowledge.

Current public health strategies to control the transmission of HIV disease focus on modifying risk behaviors. Most efforts to attain this goal have been based on the conviction that individuals, when presented with the correct information will change their behavior in response to that information. Whether this assumption is correct or not the evidence is mixed. The fact is that many interventions have pointed to increase knowledge as a prerequisite for changing behavior and thus controlling the transmission of AIDS. Recent research has indicated that though knowledge is important, it has not been found to be strongly related to behavior change and the adoption of safer sex

practices. A study on high school students pinpointed that many students fail to use knowledge as a basis for guiding their behavior (31).

2.4. SOURCES OF INFORMATION, LEVELS OF AWARENESS AND PRACTICE ABOUT HIV/AIDS

The level of awareness regarding AIDS is globally high. Knowledge, attitude, belief, practice survey carried out in Tanzania indicated that 97% of the respondents were aware of AIDS and over 80% knew the major routes of transmission (33). In addition, a study from Zaire revealed that 99% of men and 96% of women had heard about AIDS (34). Research in Zimbabwe showed similar high level of knowledge about HIV/AIDS (35). A study among adolescents in Nigeria showed that 95.2% of the respondents were aware of AIDS (36). In all of these studies, gaps and misunderstandings have been identified (33-36). The vast majority of those who heard of AIDS learned about AIDS from the radio. Only small percentage of respondents received information about HIV/AIDS from parents and a few of study subjects mentioned brochures, newspaper articles, or posters as a source of AIDS information(33-36).

In Ethiopia, the main information source among the urban population was television and radio. In rural areas, radio was reported to be the leading source of information followed by peers, relatives, health institutions and mass organizations (37). In a study conducted in Jimma town in 1991, the main source of HIV/AIDS information was radio

and television (38). In another survey conducted in Dembia (northwestern Ethiopia) in 1995, the common source of information were friends (48%), health workers (16%), schoolteachers (12.4%), and the radio (11.2%) (39). In Addis Ababa a study among college students in 1997 indicated that most of the students (68.8%) heard about HIV/AIDS over the radio, television (56.2%), and newspapers and magazines (45%). Nineteen percent of males and nine percent of females regarded the source of information to be their peer groups (19).

Studies conducted in different parts of Ethiopia at different times revealed that there is evidence of increased knowledge about AIDS. Sexual intercourse was considered to be the main mode of transmission by majority of respondents. However, misconceptions such as transmission through casual contact like shaking hands, drinking unsafe water, eating together and mosquito bites were reported (37-40). The preventive measures cited in the studies were staying with a single partner abstinence and condom use (38-40).

2.5. THE MASS MEDIA AND INTERPERSONAL COMMUNICATION IN HIV/AIDS IEC PROGRAMMES

IEC messages were imparted using mass media and inter-personal channels. There is consensus that mass media creates awareness and set the agenda while inter-personal channels are more likely to influence behavior (41). The mass media has contributed to increase awareness in Switzerland, Uganda, Zaire, Zambia and Mexico. However, it is less clear how much it contributed to changing high-risk behaviors (1,42).

Mass media plays a significant role in the lives of youth especially with respect to messages about HIV/AIDS. On the contrary, one study found that young people watching TV after school for 3-5 hours see about 57 acts of sexual behavior weekly. During evening the exposure will be tripled that number in a week. In addition, two-thirds of music videos and popular songs are about love and sex. In all instances these are rarely accompanied by reference to HIV (28,43).

The inter-personal approach is target specific and involves more interaction and influence (41,42). It is directed to address people at many different levels of risk such as youths through various methods. In addition to other sources in school, students are addressed by formal teaching through school courses, peer education and by Anti-AIDS Clubs.

HIV/AIDS must be integrated into comprehensive school based curricula. Within the curriculum, there must be opportunities to address the whole range of prevention options. Most specifically, school based HIV/AIDS IEC should match the needs of young people. The IEC materials must be age and culture appropriate and introduced before the risk taking behavior is likely to occur (30). In Ethiopian high schools HIV/AIDS topic is integrated in biology subject.

Although, families and schools are expected to teach youth about sex and sexuality, young people around the world reported that they learn from their friends, other peers,

books, magazines and the mass media. Most of the information they acquired from these source were indicated to be misleading, incomplete or wrong. Young people reported that they learned too little and too late about sexuality (28). Girls are more likely to learn about sex and sexuality from their mothers or another family member than boys. For instance, in students in Santiago (Chile) three –quarters of young women have discussed with either their mothers or both parents. On the other hand, nearly half of young men had not discussed sexual topics with either parent. Even when they discuss with parents and other family members youth may not get accurate and complete information (28).

2.6. IMPLICATION OF THE STUDY TOWARDS PROGRAM DESIGN

Human beings tend to act in terms of what they know, expect, on hopes that actions may yield. How they behave with respect to any situation tends to be in accordance with how they perceive or define the situation (44). In the same token, if IEC on HIV/AIDS is perceived useful and people accept the information, they will be motivated to take action, adopt the action and change their behavior. This happens when the needs, interests, wants, and concerns of the audience, their opinions, attitudes and beliefs, the values they hold, their psychological sets and the assumptions that govern their health behaviors are considered in designing IEC. Such information regarding the audience is of crucial significance. Of equal importance is the knowledge they have regarding the possibilities for action in relation to HIV/AIDS and the possibilities for action they perceive as feasible and appropriate for themselves. Attention needs also to be given to the types of information sources they prefer their independent or dependent patterns of

behavior and their information and channel preferences. However, little attention has been given to this component in Ethiopia. Furthermore, assessment of the perception of youth about the achievement of IEC is meager in this country. On the other hand, young people are more likely to adopt and maintain safe behaviors if they get appropriate, relevant and practically applicable messages. Therefore making youth excellent candidate for prevention efforts will reduce youth exposure to HIV and ultimately result in fewer infections among the general population. Thus to generate such information this study was conducted among high school students in Addis Ababa. It tried to assess the perceived sufficiency and usefulness of HIV/AIDS IEC messages and materials as well as to identify youth preferences which will help planners to design effective IEC interventions for high school students.

3. OBJECTIVES

GENERAL OBJECTIVES

The overall objective of this study is to investigate the perceived sufficiency and usefulness of IEC materials and methods related to HIV /AIDS among high school youth in Addis Ababa.

SPECIFIC OBJECTIVES

The specific objectives of this study are to:

1. identify the source of information about HIV / AIDS among high school youth.

2. assess the perceived sufficiency of IEC materials and methods about HIV/AIDS among high school youth.

3. assess opinions of high school youth with regard to how far the IEC materials and methods were useful to influence their knowledge, attitudes and behaviors related to HIV/AIDS.

4. determine the preferred methods of learning about HIV/AIDS among high school youth.

4. METHODOLOGY

4.1. STUDY DESIGN

This is a cross sectional descriptive institutional study conducted among high school youth from November 2001 to April 2002 .

4.2. STUDY AREA

This study was conducted in Addis Ababa the capital of Ethiopia. The city is found between 9 degrees latitude and 38 degrees longitude at an altitude of 2220-2800 meters above see level. It has a population of 2.6 million. Youth (15-24 years) constitute 20% of the population. According to the 1994 census, 46% were Amhara, 19.2% Oromo, 13.5% Guragie and 7.6% Tigre by ethnicity. Regarding religion, the majority (81.8%) of the people were Christians (45). Addis Ababa comprises of six zones 28 woredas and 328 kebeles. There are 51 secondary schools in the city. Schools are not evenly distributed in each zone (Table 1). The total number of students in 2001/2002 academic year is 133,026 (46).

Table 1: Senior high schools found in Addis Ababa, by ownership and location in 2001/2002

Zone	Private Schools					Public schools	Others	Total
	Private	Religious schools			Foreign Community			
		Church	Mission	Mosque				
1	-	-	-	-	-	1	-	1
2	-	-	-	1	-	5	1	7
3	2	-	2	-	2	5	1	12
4	2	1	2	-	1	7	-	13
5	2	-	6	-	2	5	-	15
6	-	-	1	-	-	1	1	3
TOTAL	6	1	11	1	5	24	3	51

4.3. STUDY POPULATION

The source population was all high school students in Addis Ababa who are 15-24 years of age and enrolled in grades 9 through 12 for the 2001/2002 academic year. The study population was selected from the source population using two-stage sampling.

Exclusion criteria

Schools with the following categories were excluded due to their peculiar nature

-Schools with special student population such as prison

-Foreign community schools

-Individual students who are not able to complete the questionnaire without assistance such as the visually impaired.

4.4. Sample size

The sample size for the study was calculated based on the following assumptions. The level of significance was taken to be 95 %, ($Z\alpha/2=1.96$), power 80%, design effect 2, margin of error 5%, since the exact prevalence of perceived sufficiency and usefulness of IEC on HIV/AIDS among high school youth is unknown, to get the largest sample size an estimate of 50% prevalence was taken. In addition, 20% allowance was considered for non-response based on the findings from previous school based studies.

$$n= \frac{(z\alpha/_2)^{2.} P\,(1-P)}{(d)^2} = \frac{(1.96)^{2.} 0.5(1-0.5)}{(0.05)^2}$$

Where:

P= prevalence of perceived sufficiency and usefulness of IEC on HIV/AIDS 50%

d =the margin of error between the sample and the population 0.05

$Z\alpha/2$ = critical value at 95% confidence level of certainty (1.96).

The calculated sample size=384.16

20% non response rate=77

Design effect=2

Based on these the required sample size was found to be 922

SAMPLING PROCEDURE

Two -stage sampling was used.

First stage*:*

The sample schools were selected using probability proportionate to size based on the following steps. (Methodology adapted from Family Health International in conducting Behavioral Surveillance Survey [BSS] in Ethiopia)

1. From the 51 high schools 45 schools which can fulfill the inclusion criteria were taken as a primary sampling unit (PSU).
2. The PSUs were listed with their corresponding measure of size.
3. Cumulative measure of size was calculated. The total cumulative measure of size is 132095.
4. In this study 23 schools have been taken. The sampling interval was calculated by dividing the total cumulative measure of size for the number of schools to be taken (132095/23 = 5743
5. A random number between 1 and 5743 was selected. Then this number was compared with the cumulated measure of size of the column. The unit within whose cumulated measure of size the number falls is the first sample unit.
6. Subsequent units are chosen by adding 5743 to the number identified.

***Second stage*:**

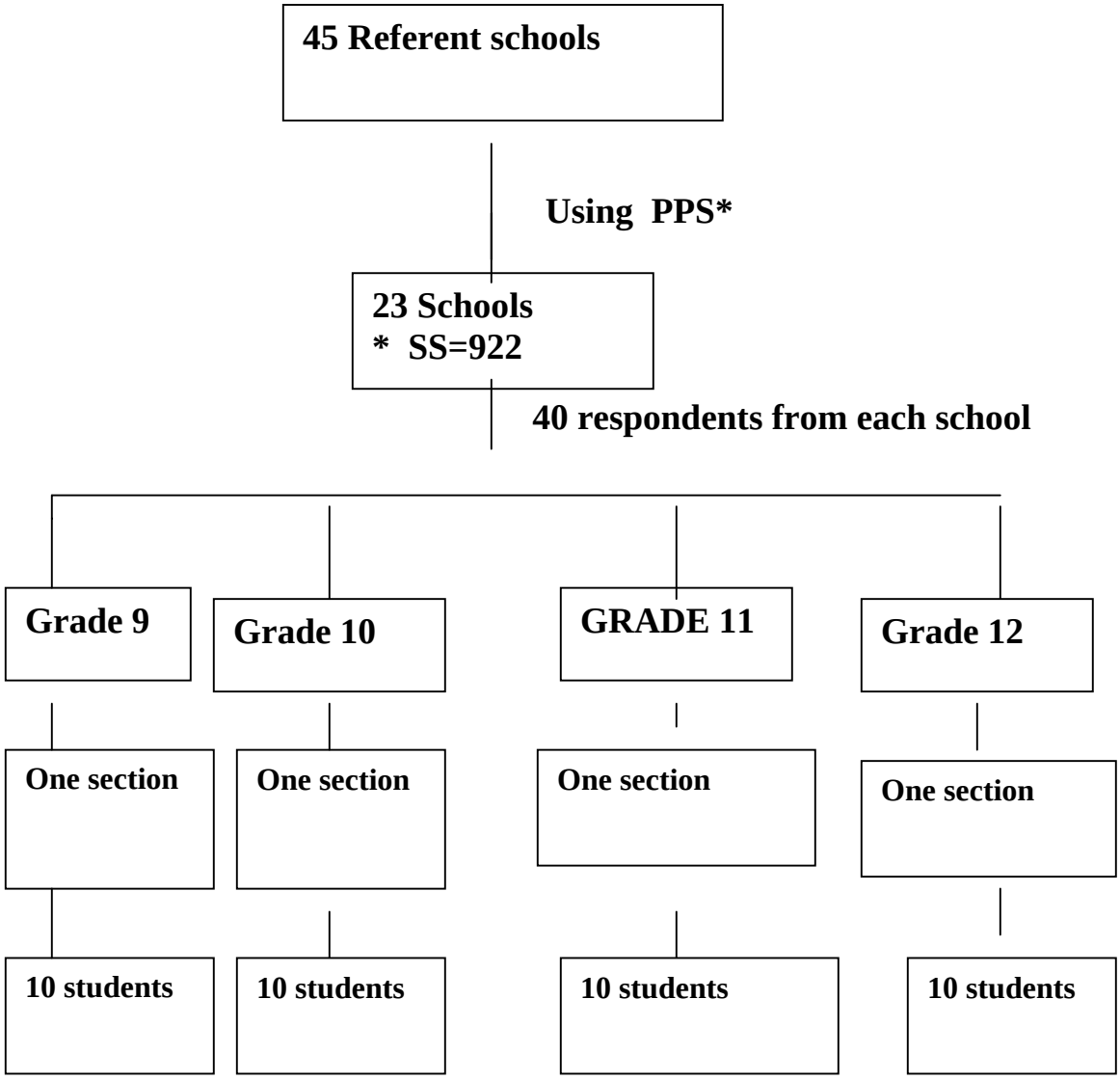
1. Equal number of respondents (40) were selected from each school.

   (sample size divided by the number of schools to be taken 922/23=40).

2. The number of eligible for each school was divided equally in to four grades (9, 10, 11,12)

3. From each grade, one section was selected by lottery method.

4. Ten respondents from the selected section were taken randomly from the roll call.



Schematic representation of the sampling procedure

- **PPS- Probability proportionate to size**
- **SS- Sample Size**

4.5. DATA COLLECTION TOOLS

A closed and open ended self-administered questionnaire was prepared in English then translated to Amharic then back to English to ensure understandability and message consistency and reliability to be finally administered in Amharic. The instrument was pre tested in a school which is not selected for the study. On average it took one hour ranging from 45-80 minutes to administer the questionnaire. The pretest result was good except minor corrections (two questions lacked clarity and skipping patterns were incomplete) for which the necessary change have been made. After the completion of the pretest, discussion was held with the respondents in order to assess the clarity, understandability, completeness, skipping pattern and the sensitiveness of the questions.

Before commencing the study discussions were held with concerned personnel of the City Education Bureau, Zonal Education Bureau, directors of the selected schools and guidance officers of each school to explain the purpose of the study.

Two supervisors and 17 data collectors were recruited and trained. The data collection was completed within four days to avoid contamination. Respondents were helped to seat in their proper place and through instruction and explanation were given in advance by the data collectors on how to respond to the questions, the confidentiality of the study and about filling the questionnaire by their own. The

principal investigator coordinated all administrative, logistic and other necessary conditions, as well as made informed and surprised supervision.

Qualitative Data

A semi-structured focus group discussion(FGD) guide was prepared by the principal investigator. The objective of the FGD was to obtain an in-depth information on the perception of youth about the sufficiency and usefulness of HIV/AIDS IEC methods and materials. The discussions were conducted with two groups of male and female students after the survey was completed. Homogeneity of the participants in terms of sex was maintained. The key informants were high school students who are members of the AACs and each grade (9-12) was represented in each group. Each group consisted of 8 members. The discussion was conducted on the basis of the pre prepared discussion guide and moderated by the principal investigator. It was held in a private and quite environment. It took on average 90 minutes with each group. Each discussion was fully tape recorded and notes were taken by the moderator's assistants.

4.6. VARIABLES

DEPENDENT VARIABLES

- **HIV/AIDS related knowledge, belief, attitude, practice and behavior.**
  - Knowledge of the transmission and preventive methods of HIV/AIDS
  - Attitude towards AIDS and PLWHA

- Practice related to HIV/AIDS
- Assertive communication skills

❖ **Sources of HIV/AIDS information**.

❖ **Perceived sufficiency and usefulness of IEC on HIV/AIDS:**

- Message appropriateness, clarity, simplicity, acceptability, sufficiency and practical applicability;
- Source credibility
- Youths perception about the effect of IEC efforts on their knowledge, attitude, practice and behavior

❖ **Information preferences**

- Preferred source(s) of information, preferred messages, and preferred channels of communication to learn about HIV/AIDS.

INDEPENDENT VARIABLES

❖ **Socio-economic and demographic characteristics**: sex, age, school grade, ethnic group, religious group, parents educational status, income of parents, and access to television and radio at home.

❖ **IEC materials exposure**: TV, Radio, Newspaper, Posters, Leaflets, school lessons, AACs, peer educators, Religious leaders and Parents.

4.7. OPERATIONAL DEFINITIONS

1. Perceived usefulness - is the perception of high school youth about the helpfulness of the IEC effort in increasing their knowledge about the transmission, and prevention mechanisms of HIV/AIDS, in changing their attitude and belief about AIDS and PLWHAS and in acquiring practice relevant to the prevention of HIV/AIDS and practically applying and maintaining this behavior in real life situation.

2. Perceived Sufficiency - is the perception of youth about the adequacy of HIV/AIDS IEC Materials and methods to address their needs and expectations.

3. Youth - the population between 15-24 years of age.

4. High school youth - students who are enrolled in grades 9 through 12.

5. Knowledge of the transmission methods of HIV/AIDS – a subject's ability to name at least three most important ways that HIV is transmitted: sexual intercourse, blood transfusion, prenatal transmissions and sharing injection needle and syringes and other cutting instruments.

6. Knowledge of the prevention methods of HIV/AIDS – subject's ability to identify at least three methods to prevent HIV: sexual abstinence, delaying sex, monogamy, use a condom properly and consistently and not using unsteril injection needles and cutting instruments.

7. **Attitudes towards AIDS and PLWHA –** the feelings, opinions, beliefs and overt actions about HIV/AIDS and the predisposition they have towards PLWHAS.

8. **Assertive communication skills -** the ability and confidence of youth to negotiate safer sex.
9. **Source credibility** – competence, trustworthiness and believability of the source.
10. **Clarity** – without ambiguity
11. **Simplicity** – within the level and understanding of the receivers
12. **Appropriateness** – the message which is actually needed by the receivers
13. **Relevance**- the degree to which the message was applicable to the knowledge, beliefs, circumstances and prior experience of the youth.
14. **Acceptability** – the degree to which the IEC messages provided satisfy the expectation of youth.
15. **Primary prevention-** intervening before exposure or the occurrence of a disease.

4.8. DATA QUALITY

The questionnaire was developed by the principal investigator, after extensive review of relevant literatures on communication (20,42,44,47,48,49). Four experts in the field reviewed the draft. Apart from the logical flow of questioning for which the necessary correction has been made, no major change was recommended. The questionnaire was pre-tested in similar area and similar study subjects. Data collectors, coordinators and supervisors were trained. Informed and surprised supervision of the data collection process was made.

4.9. DATA MANAGEMENT AND ANALYSIS

EPI INFO version 6.4 and SPSS statistical packages were used to process the data. The raw data were entered into the computer using the data entry program of the EPI info system. The data were then cleaned prior to analysis. Computer printouts of frequencies were used to check for outliers. Logical and consistency errors were checked after completing data entry. Frequency distribution of dependent and independent variables were obtained. The FGDs were first transcribed and summarized based on its major themes.

4.10. ETHICAL CONSIDERATIONS

Ethical clearance was obtained from the Department of Community Health and the Addis Ababa University. A formal letter was written to all concerned authorities and permission was secured at all levels. Informed verbal consent was obtained from each respondent after explaining the purpose and procedure of the study. Responses were kept confidential and anonymous.

RESULTS

A total of 922 in school youth aged 15-24 were identified from 23 high schools. Of these data were collected from 901 students comprising 97.7% of the response rate. The non response rate was much smaller than the expected. This might be attributed to the proper explanation of the objective of the study to the respondents, the assurance of confidentiality and the maintenance of privacy during the data collection process.

5.1 Socio-demographic Characteristics of the Study Population

The Socio-demographic characteristics of the respondents are depicted in table 2. From the 901 subjects, 464(51.5%) were females and 841(93.3%) were in the age group 15 to 19 years. The mean and median age of the study population were 17.3($\pm$1.4Sd) and 17years respectively. The majority of students 502(55.7%) were Amhara by Ethnicity and 778(86.3%) Christian by religion. Most of the respondents 891(98.9%) are not currently married, 575(63.8%) live with both parents, 655(72.7%) perceive their family economic status as medium. One hundred eighty five (20.5%) are grade 9, 234(26%) grade 10, 107(11.9%) preparatory, 62(6.9%) vocational and 313(34.7%) were grade 12 students. Generally, 734 (81.5%) of students responded that religious subjects are not given in their school, 837(92.9%) have radio in the household and 628(69.7%) have television at their home. Regarding parental education 241(26.7%) and 347(38.5%) of respondents father and mother respectively are without formal education.

Table 2. Demographic Characteristics of High School Students. Addis Ababa, Nov. 2001.

Variable	Number	Percent
Sex		
Female	464	51.5
Male	437	48.5
Age		
15-19	841	93.3
20-24	60	6.7
Religion		
Christian	778	86.3
Muslim	109	12.1
Others	14	1.5
Ethnicity		
Amhara	502	55.7
Oromo	153	17.0
Tigre	96	10.7
Guaregie	80	8.9
Others	70	7.8
Current marital status		
Married	10	1.1
Not married	891	98.9
Live with		
Both Parents	575	63.8
One Parent	274	30.4
Others	52	5.8
Perceived family economic status		
Poor	124	13.8
Medium	655	72.7
Rich	36	4.0
No response	86	9.5
Grade		
Ninth	185	20.5
Tenth	234	26.0
Preparatory	107	11.9
Vocational	62	6.9
Twelve	313	34.7
Radio in the household		
Yes	837	92.9
No	64	7.1

Continued from table 2

Television in the household		
Yes	628	69.7
No	273	30.3
Paternal education level		
Illiterate and non formal	241	26.7
Elementary complete	120	13.3
High school complete	228	25.3
Above 12 grade	312	34.6
Maternal education level		
Illiterate and non formal	347	38.5
Elementary complete	138	15.3
High school complete	219	24.3
Above 12 grade	197	21.9

5.2 Sources of Information about HIV/AIDS

As it is shown in table 3 all students reported that they have heard about HIV/AIDS. Most of them 472 (52.4%) heard about before 3 years and they first heard from 351 (39%) radio, 196 (21.8%) television, and 145 (16.1%) schools. The most common source of information at home were radio 628 (69.7%), and television 516 (57.3%). In school were AACs 497 (55.2%) and friends 307(34%). Out of home and out of school sources were health professionals 438(48.6%) and religious leaders 405 (45%).

Table 3. Reported Source of HIV/AIDS Information by High School Students Addis Ababa, Nov. 2001

Variable	Number	Percent
Heard about HIV/AIDS	901	100
Time first heard		
1-3years	215	23.9
4-5years	237	26.3
Above five years	235	26.1
Do not know	214	23.8
First heard from		
Family	110	12.2
Friends	40	4.4
School	145	16.1
Church/mosque	28	3.1
Health professional	50	5.5
Television	196	21.8
Radio	351	39.0
Poster	19	2.1
Pamphlets	36	4.0
Sources of information at home		
Father	174	19.3
Mother	176	19.5
Brother	127	14.1
Sister	119	13.2
Grand parents	42	4.7
Radio	628	69.7
Television	516	57.3
News paper	344	34.9
Others	49	5.4
Sources of information at school		
Teachers	278	30.9
AACs	497	55.2
Peer educators	31	3.4
Friends	307	34.0
No one	145	16.1
Sources of information out of home and school		
Friends	267	29.6
Elderly people	142	15.8
Community leaders	105	11.7
Religious leaders	405	45.0
Neighoubers	74	8.2
Health professionals	438	48.6
No one	26	2.9
Others	36	4.0

5.3 Exposure to HIV/AIDS Related Information

More than half, 481 (53.4%) of the respondents had discussion with their parents about HIV/AIDS, out of these 287 (59.7%) had discussion about at least once a month. A considerable number of students heard daily about HIV/AIDS from the radio 379 (42.1%) and television 337(39.9%). Seven hundred twenty two (80.1%) participants claimed that they have seen posters about HIV/AIDS in the health institutions and school. Three hundred fifty three (39.1%) got leaflet about HIV/AIDS. Six hundred seventy five (74.9%) of the students know that there is AACs in their school of these only 63 (7.0%) are member. Although 237 (26.3%) of them responded that HIV/AIDS topics are included in the curriculum, only 212 (23.5%) had opportunity to learn how to use condom and 189 (21%) learnt assertive communication skills in class. One hundred eighty two (20.2%) of study subjects reported the presence of peer educators in the school, of these it was easy to discuss with for only 118(64.8%) respondents(Table 4).

Table 4. Exposure of In- School Youth to HIV/AIDS Related information

Addis Ababa Nov 2001

Variable	Number	Percent
Discuss with parents about HIV/AIDS		
Yes	481	53.4
No	420	46.6
Frequency of discussion with parents about HIV/AIDS in the last four weeks		
Daily	29	6.0
At least once a month	287	59.7
Do not know	165	34.3
Heard about HIV/AIDS on the radio		
Yes	861	95.6
No	40	4.4
Frequency of exposure to HIV/AIDS information on the radio in the last four weeks		
Daily	379	42.1
At least once a month	482	53.5
Watched about HIV/AIDS on television		
Yes	845	93.8
No	56	6.2
Frequency of exposure to HIV/AIDS information on television in the last four weeks		
Daily	337	39.9
At least once a month	508	60.1
Read about HIV/AIDS on the newspaper		
Yes	224	24.9
No	677	75.1
Frequency of reading news paper about HIV/AIDS in the last four weeks		
Daily	69	30.8
At least once a month	155	69.2

Continued from table 4

Seen poster about HIV/AIDS		
Yes	722	80.1
No	179	19.9
Got leaflet about HIV/AIDS		
Yes	353	39.2
No	548	60.8
AACs in the school exists		
Yes	675	74.9
No	226	25.1
Memberness of AACs		
Yes	63	7.0
No	612	67.9
HIV/AIDS in the curriculum		
Yes	237	26.3
No	664	73.7
Learn how to use condom in class		
Yes	212	23.5
No	689	76.5
Learn assertive communication skills in class		
Yes	189	21.0
No	712	79.0
Peer educators available		
Yes	182	20.2
No	719	79.8
Ease of discussing with peer educators		
At ease	118	64.8
Not at ease	64	35.1

5.4 Perceived Sufficiency of HIV/AIDS Messages

As it is presented in table five none of the information sources were regarded as highly credible and none of the messages were rated as highly understandable, appropriate, timely, practically applicable, accessible and compatible with the interests and expectations of youth. However, radio and television were rated better than health professionals, religious leaders and AACs.

Although, nearly half of the respondents 456(50.6%) claimed that the IEC messages and materials were sufficient to increase their knowledge, the majority of study subjects reported 544 (60.4 %) and 519(57.6 %), that the messages were not adequate to change their attitude and acquire practice relevant to HIV/AIDS.

Table 5. Perceived Sufficiency of HIV/AIDS Messages by Addis Ababa High School Students. Nov. 2001

Variable	Number	Percent
Credible		
Radio	527	58.5
Television	511	56.7
Health professionals	422	46.8
Religious leaders	384	42.6
AACs	306	34.0
Understandable		
Television	476	52.8
Radio	469	52.1
Religious leaders	307	34.1
Health professionals	300	33.3
AACs	208	23.1
Appropriate		
Radio	459	50.9
Television	446	49.5
Health professionals	292	32.4
Religious leaders	277	30.7
AACs	197	21.9
Timely		
Radio	495	54.9
Television	435	48.3
Health professionals	270	30.0
Religious leaders	236	26.2
AACs	165	18.3
Practically applicable		
Radio	420	46.6
Television	395	43.8
Health professionals	287	31.9
Religious leaders	211	23.4
Family	189	21.6
Accessible		
Radio	482	53.5
Television	308	34.2
Family	166	18.4
Religious leaders	147	16.3
Peers	109	12.1

Continued from table 5

Interested to get message from		
Radio	482	53.5
Television	308	34.2
Family	166	18.4
Religious leaders	147	16.3
Health professionals	116	12.9
Degree of IEC contained message expected		
High	245	27.2
Moderate	259	28.7
Fair	227	25.2
Not at all	170	18.8
Sufficiency to increase knowledge		
Sufficient	456	50.6
Insufficient	445	49.4
Sufficiency to change attitude		
Sufficient	357	39.6
Insufficient	544	60.4
Sufficiency to acquire practice		
Sufficient	382	42.4
Insufficient	519	57.6

5.5 Perception of the Level of knowledge Acquired as a result of IEC and Reported Knowledge

Of the total 901 study population 761(84.5%) perceived that IEC has increased their knowledge. Television 287(37.7%), radio 266(35%), religious leaders 198(26%), family members 193(25.4%), and health professionals 97(12.7%), were responsible sources cited to increase their knowledge. Seven hundred one (77.8%), of study participants knew that AIDS is incurable, 560(62.2%), knew that currently there is no vaccine, 844(93.6%), knew at least three mode of transmission and 808(89.5%), knew at least three prevention methods. Some of the respondents had misconception and speculation about the transmission of HIV/AIDS: such as transmission as a result of wearing cloth worn by PLWHAS 237(26.3%), sharing toilets with PLWHAS 216(24%), mosquito bites 215(23.9%), eating together with PLWHAS 159(17.6%) and shaking hands 142(15.8%)(Table 6).

Table 6. Perception of High school Students about the Level of Knowledge they got about HIV/AIDS and reported Knowledge about HIV/AIDS. Addis Ababa Nov. 2001

Variable	Number	Percent
Perceived increase in knowledge about HIV/AIDS		
Yes	761	84.5
No	140	15.5
Source helped to increase knowledge		
Television	287	37.7
Radio	266	35.0
Religious leaders	198	26.0
Family	193	25.4
Health professionals	97	12.7
Others	67	7.4
Knew AIDS is incurable	701	77.8
Knew that currently there is no vaccine	560	62.2
Knew at least three modes of transmission	844	93.6
Knew at least three methods of prevention	808	89.5
Misconceptions about HIV/AIDS Transmission Methods		
Shaking hands	142	15.8
Eating together with PLWHAS	159	17.6
Sharing toilets with PLWHAS	216	24.0
Wearing cloth	237	26.3
Mosquito bite	215	23.9

5.6 Perceived change in attitude, reported attitude, risk perception and intention

As presented in table 7 out of all, 704(78.1%) claimed to have changed their attitude. Television 222(31.5%), radio 181(25.7%), religious leaders 152(21.6%), family members 109(15.5%) and health professionals 98(12.8%) were the sources reported to this change. Concerning transmission beliefs, 689(76.5%), believe that person who feels/looks healthy could transmit the AIDS virus. Seven hundred and sixteen (79.5%) had a belief that person with multiple partners has more risk than person with one partner, 120(28%) believe that sex with condom is not enjoyable. Regarding their attitudes towards PLWHAS, 717(79.6%)are willing to give care to AIDS patients, and 558 (61.9%) do not mind to eat meal together with PLWHAS, and 444 (49.3%), have positive feeling to live in the same house with PLWHAS. Eight hundred seventeen (90.7%) and 84(9.3%) of the study subjects had the intention to abstain from sex and use condom respectively in the next three months. Furthermore, 252(29%) feel that they are not vulnerable to get HIV/AIDS.

Table 7. Perception of High School Students about the Change in attitude, Reported Attitude, Risk Perception and Intention Related to HIV/AIDS. Nov. 2001

Variable	Number	Percent
Perceived change in attitude about HIV/AIDS		
Yes	704	78.1
No	197	21.9
Source helped to change attitude about HIV/AIDS		
Television	222	31.5
Radio	181	25.7
Religious leaders	152	21.6
Family	109	15.5
Health professionals	98	12.8
Others	69	7.7
Transmission belief		
Person who feels healthy could transmit the AIDS virus	689	76.5
Person with multiple partners has more risk than person with one partner	716	79.5
Sex with condom is not enjoyable	120	28.0
Attitude towards PLWHAS		
Would take care of PLWHAS	717	79.6
Would eat meal together with PLWHAS	558	61.9
Live in the same house with PLWHAS	444	49.3
Intention in the next three months		
Abstain from sex	817	90.7
Condom use	84	9.3

5.7 Perceived Usefulness of HIV/AIDS IEC Messages and Materials in Acquiring Practice Relevant to the Prevention of HIV/AIDS and Reported Sexual Practice.

Perceived change in practice were reported by 676(75%) of the respondents. Television 179(26.4%), radio 165(24.4%), religious leaders 148(21.9%), family 140(20.7%) and health professionals 93(13.6%) were the sources that helped them to change. They reported that HIV/AIDS IEC was useful to make decision to abstain from sex 815(90.5%), to stick to one uninfected faithful partner 86(9.5%), use uninfected instruments 317(46.9%), correct and consistent use of condom 80(8.9%). Hundred students (11.1%) were sexually active. The mean age of first intercourse was 17 years. Eighty (8.9%) had sexual intercourse in the last 12 months, of these 14(17.7%) had more than one sexual partner. Forty seven (58.7%) of the study subjects used condom correctly and consistently in the last 12 months of sexual intercourse (Table 8).

Table 8. Perceived Usefulness of HIV/AIDS IEC Messages and Materials In Helping High school Students to Acquire Practice and Reported Sexual Practices. Addis Ababa, Nov. 2001

Variable	Number	Percent
Perceived change in practice about HIV/AIDS		
Yes	676	75.0
No	225	25.0
Source helped to change practice about HIV/AIDS		
Television	179	26.4
Radio	165	24.4
Religious leaders	148	21.9
Family	140	20.7
Health professionals	93	13.6
Others	63	9.3
Practice improved		
Abstain from sex	815	90.5
Stick to one uninfected faithful partner	86	9.5
Correct and consistent use of condom	80	8.9
Using uninfected instruments	317	46.9
Ever had sexual intercourse	100	11.1
Age of first intercourse		
14-16	35	35.0
17-19	42	42.0
>20	5	5.0
Do not know	18	18.0
Sexual intercourse in the last 12 months	80	8.9
Number of sex partners during last 12 months		
One	66	82.5
2-5	10	12.6
Above 5	4	5.1
Correct and consistent use of condom in the last 12 months	47	58.7

5.8 Preferences Of sources of information, messages and channels of Communication about HIV/AIDS

As it is depicted in table 9 none of the information sources are highly preferred. Never the less, the preferred sources according to their rank were radio 482(53.5%), television 481(53.4%), health professionals 468(51.9%), religious leaders 420(46.6%), family 381(42.3%), AACs 364(40.4%), teachers 340(37.7%), PLWHAS 339(37.6%), peer educators 291(32.3%), leaflet 269(29.9%), news paper 266(29.5%) and posters 239(26.5%).

The preferred message content comprised of appropriate information and education 563(62.49%), skill training and self empowerment 413(45.8%), preventive mechanisms of HIV/AIDS 259(28.7%), cause and transmission HIV/AIDS 225(24.97%), all aspects of HIV/AIDS 193(21.4%), how to live with PLWHAS and their personal experience 63(7%), behavior change 34(3.8%), and self discipline 20(2.2%).

Regarding method of delivery, the majority wanted to learn by drama 612(67.9%), followed by school lesson 409(45.4%), discussion 311(34.5%), song 257(28.5%), news 211(23.4%) and speech 177(19.6%).

Concerning the time to be taught by radio/television, a considerable number of respondents preferred Saturday and Sunday afternoon 482 (100%), evening after eight 480(99.6%) and after five throughout the week 102(21.2%).

Table 9. Preferences of Source Of Information, Messages and Channels Of Communication About HIV/AIDS by High School Students. Addis Ababa, Nov. 2001.

VARIABLE	NUMBER	PERCENT
Sources of information		
Radio	482	53.5
Television	481	53.4
Health professionals	468	51.9
Religious leaders	420	46.6
Family	381	42.3
AACs	364	40.4
Teachers	340	37.7
PLWHAS	339	37.6
Peer educators	291	32.3
Leaflet	269	29.9
News paper	266	29.5
Poster	239	26.5
Message content		
Appropriate information and education	563	62.4
Skill training	413	45.8
Prevention mechanism	259	28.7
Cause and transmission	225	24.9
All aspects of HIV/AIDS	193	21.4
How to live with PLWHAS	63	7.0
Behavior change	34	3.8
Self discipline	20	2.2
Method of delivery		
Drama	612	67.9
Education	409	45.4
Discussion	311	34.5
Song	257	28.5
News	211	23.4
Speech	177	19.6
Preferred time to be taught by radio/television		
Evening after 8	480	99.6
Saturday and Sunday afternoon	482	100
After 5	102	21.1
Morning before 8am	30	6.2
Anytime	22	4.6

RESULTS OF THE FOCUS GROUP DISCUSSION

1. Cause, transmission, and prevention

Respondents reported that knowledge of the cause, transmission and prevention is high, but there are misconceptions and speculations, such as transmission through casual contact and mosquito bites. One respondent reported that "**since HIV is transmitted through blood and blood products there is no reason that one cannot get HIV from mosquito bites there is such kind of belief among youth".**

2. Sources of information about HIV/AIDS

The sources of information cited about HIV/AIDS were mass media, AACs, leaflets, posters, religious leaders, teachers, friends, health professionals, parents and newspapers.

3. Usefulness and sufficiency of HIV/AIDS IEC messages and materials

3.1. Mass media

Mass media is the main source of information about HIV/AIDS to in-school students. The way it is presented is appealing to young people. Sometimes transmit current information. It is consistently delivered. It increased youth awareness about HIV/AIDS. It is the most accessible source to students. Female respondents reported that **" mass media is the most accessible source of information about HIV/AIDS and sexuality to female students as they are shy of talking this topic with any body else".**

Nevertheless, it didn't fully address the expectation of youth. The same message is transmitted repeatedly day to day which is monotonous and ends up in lack of interest. One boy replied that we here in the television the word **"give value for your life every day, but we are not told how to do it, as a result students take it as a fun".**

Respondents reported that the films and music's presented in the mass media are sexual arousing, it stimulates students to initiate sex and encourage them to experiment with it as a result to relieve sexual tension youth may go to unplanned and unprotected sex. Furthermore, advertisement of condoms makes students think that condom is the first alternative to prevent HIV/AIDS. In addition it is not followed by usage instruction **"even the advertisement of Aerial has instruction how to use it".** Almost all respondents reported that **"the media people are confusing youth and spoiling the generation. It is difficult for us which one to choose".**

3.2. School based HIV/AIDS IEC

HIV/AIDS topics are included in biology subject. However, it is only devoted in acquainting students on the definition, cause, transmission and prevention mechanisms of HIV/AIDS. There is no opportunity for students to learn about life skills such as about sex and sexuality, negotiation, decision making and assertive communication skills. Students reported that **"the teachers themselves do not have the willingness, the courage as well as the knowledge to teach such life skills".** They pin pointed that discussion with teachers about such issues were too hard for the students.

3.3. Parents

Most parents are not willing; do not have the knowledge and skill to discuss with their children, in the same token children also have the fear to discuss with their parents about sex, sexuality and HIV/AIDS. Even if they talk, they are not getting complete information as a result family opinions and attitudes appear to be given relatively less weight than those of peers. Especially, **“if young girls talk about with their parents the norm doesn’t allow them they will be labeled as loose women”.**

3.5. Posters

They contributed their share to increase student’s knowledge about the disease. It is descriptive and attention catching. Nonetheless, some of the messages are not understandable, ambiguous, produced only on World AIDS Days. They are not posted in places were they can be easily seen. Sometimes they transmit unequivocal, irrelevant, in appropriate incomplete and misleading information.

3.6. Leaflets

They are good sources of HIV/AIDS information for some of the students. It presented factual information to young people. It can be re read when need arises. It contributed to increasing young people’s knowledge about HIV/AIDS. However, they repeatedly present the same message. They are monotonous, not interest arousing, doesn’t present the expected message and not accessible to all students. They are not produced on regular bases

3.8. Religious Leaders

Messages delivered from religious leaders are believable and credible as a result, it is considered acceptable as well as useful, but it is reported that it is not sufficient.

3.9. Friends

Respondents pointed out that friends are the main sources, next to mass media. They are accessible, but sometimes the information from this source is misleading because of their limited knowledge and experience.

3.10. AACs and Peer Educators

They are main information sources at school, they present current information to students, but they emphasize on awareness. They are not actively involved in teaching about HIV/AIDS and they are not continuously delivered and in some schools their presence is known only on World AIDS Days.

INGENERAL

All sources of information are devoted only on increasing awareness. The same message is presented from all information sources which may end up in lack of interest and lack of physical and psychological reach. Students need practical information, they want to get adequate information about sex and sexuality, and they want to develop life skills, such as problem solving, assertive communication skills, interpersonal relationships, conflict resolution skills and skills which develop their creativity and talent. According to the report, no information source did these. In addition contradictory as well as conflicting ideas are presented from all sources which resulted in misconceptions and speculations. The images in the mass media as well as in the real world (such as adults) are not good role models. Adults are doing

the opposite of what they are professing. Especially boys and girls are threatened and forced to have sex through gifts and provision of materials at the exchange of sex by adult women and men.

Future Information Source Preferences

They wanted to learn from all sources who have the ability and willingness to teach .

6. DISCUSSION

IEC is a crucial and essential element in society's armory against HIV transmission. However, Information on the assessment of the achievement of IEC efforts from client's perspective is meager in Ethiopia. The AIDS burden falls more heavily in young people aged 15-24. Therefore, to excel the rate of explosion of HIV, IEC messages should be tailored to the needs, expectations, interests, concerns, hopes, fears, and wishes of youth and continually assessed for their sufficiency and usefulness. This study investigated the perceived usefulness and sufficiency of HIV/AIDS messages and materials among high school youth in Addis Ababa.

The socio-demographic characteristics of the study population resemble previous school based studies in Addis Ababa (50,51). It is not surprising that all study subjects have heard of AIDS as a number of IEC interventions have been going on through various Medias by different government and non government Organizations (16). The mass media are emerging as one of young peoples most common and most important sources of information about HIV/AIDS with schools and parents playing relatively a smaller role (18,19,28,33,34,36,37). The finding of the present study substantiates this fact. Although students had exposure to various interpersonal and mass media messages at different settings radio and television were their main sources. The family and educational institutions played a marginal role in educating youth about HIV/AIDS. Mass communication can create awareness but only interpersonal communication can move to individual action (39). Therefore to bring about behavioral change the interpersonal component must be seriously considered.

On the contrary, mass media is criticized for depiction of contradicting and conflicting messages that arouse sexual feeling through the portray of entertainment films and songs. Moreover, the advertisement of condoms in the mass media is presented without reference to other prevention alternatives and devoid of usage instruction. This may distort youth perception resulting in faulty decision. HIV prevention is likely to have most impact when it addresses young people's wider sexual concerns including emotional needs. While young people have been bombarded with the facts about HIV and AIDS, they rarely provided with appropriate, relevant and mutually reinforcing IEC. In addition, they are afforded only a minimal chance to discuss their own ideas, thoughts and feelings. Youth not only must know how HIV is transmitted, they must have the skills to resist peer pressure, and negotiate abstinence or use of condoms.

Although, studies indicate that families and young people prefer parents to be the main sources of youth information about HIV/AIDS, actually parents do not talk to their children because they feel confused, ill informed, or embarrassed about this topic (28,29) as they have a belief that it will encourage early experimentation with sex. Nevertheless, evidences identified that communication about HIV/AIDS and sexuality did not lead to earlier sexual intercourse, and in some cases they delayed it (28). Only nearly half of the respondents in this study discussed about HIV/AIDS with their parents. In the focus group discussion, it is reported that most students are not comfortable to discuss HIV/AIDS topics with their parents. Since parents are the

first socializing agents and accessible sources in time and place utilizing this potential has a considerable importance and a break through to greater success to halt the problem.

Available evidence suggests that the widespread investment in the mass media and school based IEC campaigns has not changed youth sexual behavior (23,28). IEC strategies must combine education with cognitive and behavioral skill training such programs have been found to be effective in reducing risky sexual activity. Interventions which emphasize talking about relationships are more likely to correspond to young people's personal goals than those focusing upon infection control. Situating HIV prevention in youth contexts rather than providers is likely to promote acceptance and responsibility.

Even though, HIV/AIDS topic is integrated in biology subject, in this survey the majority of the respondents didn't have the perception that they had lesson about HIV/AIDS in class and had the opportunity to learn how to use condom and learnt assertive communication skills. People are active information seekers if the message offered is responsive to their needs. Since perception is active and a motivated process what is perceived tends to be governed by personal interests, wants, concerns and expectations. Therefore, the message should have a high degree of immediate, concrete and explicit relevance to be attended and internalized. Moreover, in the focus group discussion, it is reported that the lesson emphasizes only on the definition, cause, transmission and prevention mechanisms. This is in line with other

study (41).There is complaint now a days from educators that wide diffusion of knowledge about HIV/AIDS is not leading to any correspondingly wide change in behavior. IEC efforts should concern themselves with equipping learner's skills such as decision making, problem solving, effective communication, assertiveness and conflict resolution. In addition it should promote messages that are continuous, appropriate, acceptable and effective for behavioral change (52).

Studies have found that communicators are likely to be persuasive if they are similar to the target audience except in their expertise. Peer education programs which empower youth to become their own health educators are more likely to be successful (30,53). In this study although most of the respondents know that there are AACS only few were members of the club. Inconvenience of time and place, involvement in other clubs, lack of knowledge of the group members, not getting chance to be a member, in functionality of the club as well as not being a good role model of the club members were some of the reasons for not being the member of the club. In addition, of all the study participants 182(20.2%) recognized the presence of peer educators in the school. This shows that the peer educators as well as the AACs are not disposing the responsibility given to them.

Posters and leaflets appear to make an important contribution to young peoples understanding. However, some of the messages were not up to date, and equivocal, lack audience segmentation, clarity, and sufficient information. In addition, they were not attention catching and the messages were horrifying (15). The present study

shares this point. Furthermore, it was noted that in most instances they are not produced on periodic bases. Even the produced ones do not reach the specified audience physically as well as psychologically.

Religious leaders are becoming the most preferred sources of information in the era of HIV epidemic. It has been reported that they are doing good work because of their credibility, and message believability. Thus, maximizing this viable potential has supreme importance in bridging knowledge practice gap

Moreover, the most critical finding of the study is that HIV/AIDS IEC was only sufficient to influence the knowledge, attitude and practice of nearly half of the respondents. This depicts the weakness of IEC to open the gate way of the cognitive, affective and psychomotor domains. Much of HIV/AIDS IEC has been developed without understanding of factors that motivate youth to adopt and maintain safe behaviors. Large proportions of young people do not know how to protect themselves against HIV/AIDS. Even when awareness is relatively high, a significant proportion of youth do not see themselves as being at risk of HIV. Addressing the concerns and interests which are of direct relevance to those large proportions of young people has a paramount importance. Young people should not be denied the right to learn how to protect their health. Most importantly IEC should go up in the ladder from lower order of learning to higher level such as problem solving to bring about the desired behavior change.

The intent of IEC is to influence the cognitive, affective and psychomotor domains of the receiver. These become a reality when the source is credible and the message is understandable, appropriate, timely, practically applicable, accessible and in line with the expectation and interest of the target audiences. However, none of the information source and messages did these. These might be the cause for the misconceptions as well as the reluctance to bring about the desired behavior change.

The level of knowledge about the transmission and prevention mechanisms of HIV/AIDS in this study is relatively higher than the findings of other studies made in Ethiopia (9,37,54). However, the misconception regarding a vaccine and cure for AIDS among a significant proportion of the respondents is alarming since these may cause a sense of false security. Misconception about the transmission of HIV/AIDS such as mosquito bite, sharing toilets with PLWHAS, wearing cloth worn by PLWHAS and poor nutrition is higher compared to study made in Addis Ababa (54).

The presence of risky sexual behavior is evident in this study. The findings show that about 11% of study subjects were sexually active prior to this survey. Although, this proportion is relatively low when compared to other studies made in Addis Ababa 38%, 19%, 51% (18,50,54), in Jimma 40% (55) and Harer 43.8% (56), the mean age at first intercourse being less than 20 and having more than one sexual partner in the last 12 months without using protective device is reason for concern.

The majority of respondents had positive attitude towards PLWHAS and correct transmission beliefs. However, only 24.5% and 13.3% of the study participants had a belief that a person who feels healthy could transmit the AIDS virus, and sex with condom is not enjoyable. In addition, 50.7% of them had negative attitude to live in the same house with PLWHAS.

Although, no source of information is highly preferred mass media, health professionals, religious leaders, family, and AACs are the first five information sources chosen. This might be attributed to the lack of high credibility of the sources in the face of their audiences and insufficiency of the provided messages to address the needs and expectations of students.

The preferred message content comprised of appropriate information and education, skill training and self empowerment, preventive mechanisms, cause and transmission, all aspects of HIV/AIDS, how to live with PLWHAS, behavior change and self discipline.

In summary, the findings of the investigation suggest that the most common source of information about HIV/AIDS at home were mass media, at school AACs, out of home and out of school were health professionals and religious leaders. HIV/AIDS IEC messages and methods were only able to acquaint students with the disease. Yet beyond awareness of preventive action, knowledge about HIV HV/AIDS is fragmented and superficial. Apart from this, youth were not made to develop life

skills necessary to negotiate safer sex and to develop learners skills such as decision making, problem solving, effective communication, assertiveness and conflict resolution. In addition, IEC did not fully addressed the concerns, interests, expectations, hopes, fears and wishes of youth regarding HIV/AIDS. Perceived increase of knowledge, attitude, and practice were not up to expectation. Perceived sufficiency is also at its infancy.

7. Strength and limitation of the Study

Strength of the study

The study assessed the sufficiency and usefulness of HIV/AIDS IEC from in-school youth perspective which is a scarce information in Ethiopia. Thus, it can contribute a lot in IEC design, implementation and evaluation. It can also be used as a base-line data for future studies.

The sampling technique employed, the use of both quantitative and qualitative methods and utilization of appropriate statistical methods to minimize bias would make this study generalizable to urban high school students.

Limitation of the study

The veracity of students responses may be questioned due to the self report nature of the survey. As a result, the study may be confounded by social desirability biases. In addition, lack of similar studies to compare results are the limitations of this study.

8. Conclusion

It is a common knowledge that IEC is one of the keys to curb the spread of HIV/AIDS and mitigate its impact. The findings of this study revealed that the most common source of HIV/AIDS information to in-school students at home were mass media, in school were AACs, out of home and out of school were religious leaders and health professionals. IEC on HIV/AIDS was perceived useful by the majority of respondents to increase their knowledge, change their attitude and acquire practice relevant to the prevention of HIV/AIDS. None the less, none of the information sources are regarded as highly credible and none of the messages are rated as highly understandable, appropriate, timely, practically applicable and accessible. In addition, IEC on HIV/AIDS was criticized for not addressing the needs, expectations and concerns of in school students. Furthermore, the messages provided were not sufficient enough to trigger adequate level of knowledge, attitude and practice as most of the sources concern themselves only in acquainting young people with the disease rather than equipping them with the knowledge, attitude and skills necessary to lead their day to day life.

This study pinpointed that the IEC youth got from a variety of sources were too little, contradictory, conflicting, ambiguous, superficial and fragmented. Students should not be denied their right to get the information they actually need, in the right amount, from the right source at the right time through the right medium. It is this disempowerment that leads young people to experiment with sex and other health risk behavior. Thus considering the needs, concerns and expectations of youth as

well as making all the informal and formal IEC efforts accessible, relevant appropriate and timely should be the primary concern of those who are concerned in IEC activity and to safeguard the future of the nation.

Although none of the information sources are highly preferred most of the study subjects want to learn from all sources who have the ability and willingness to teach. However, mass media, health professionals, religious leaders, family and Anti AIDS Clubs were the top five sources chosen. They preferred to get appropriate information and education about all aspects of HIV/AIDS and life skill training through drama, school lesson, discussion, song, news and speech. The preferred time to be taught by radio/television is evening after 8 and Saturday and Sunday afternoon.

9. RECOMMENDATIONS

Based on the results of the study, the following recommendations were made:

1. Coordinated, accurate, relevant, appropriate and mutually reinforcing IEC should be delivered on HIV/AIDS through, intersectoral and multisetoral collaboration and community participation.
2. The feelings ideas, experience, expectations, concerns, problems of in school youth should be considered in IEC design. Students should be involved in the design, implementation, and evaluation of their programs and emphasis should be given on life skill training such as negotiation of safer sex, assertive communication skills, problem solving and conflict resolution.
3. Since mass media is the first preferred message source for in school youth IEC from this source should be appropriate, consistent and complete. Print materials should be prepared on continuous bases, should be culturally, age, and sex appropriate, complete and attention catching.
4. Teachers should be trained, the curriculum should pay special attention to life skill training and AACs, and peer educators should be strengthened. Parents should be thought, and work with to change their attitude and belief about communication with their children.
5. Efforts to increase the sufficiency and usefulness of IEC should be made from all concerned.

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Annex I

Addis Ababa University, Medical Faculty
Department of Community Health.
Survey Questionnaire on

Perceived sufficiency and usefulness of HIV/AIDS Information, Education and Communication (IEC) materials and messages among high school youth in Addis Ababa.

Introduction:

I'm working for a thesis research project conducted in collaboration of the Addis Ababa University and Family Health International. We are asking the responses of people in Addis Ababa in order to find out the perception of school youth about the sufficiency and usefulness of HIV/AIDS IEC materials and messages.

Confidentiality and consent:

I am going to ask you some very personal questions that some people find it difficult to answer. Your name will not be written on this questionnaire, and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end to participate in the study at any time you want to. However, your honest answers to these questions will help us better understand what people think and say about AIDS education campaigns and materials and how people respond to them. We would greatly appreciate your help in responding to this survey. The survey will take about 60 minutes to answer the questions. Never the less, if you don't want to participate in the study please leave the format up side down on the table and remain in your seat until others finish filling the questionnaire."

Would you be willing to participate? (Indicate by ticking the appropriate response.)

Yes _____
No _____

Signature of the data collector certifying that informed consent has been given verbally by the respondent

_____

Respondent's Identification Number----------

ID NO----------

PART ONE: Back ground Characteristics.

The following questions are about your background characteristics. Please indicate your response by circling the number of your choice or by writing your response in the space provided accordingly

No	Questions	Coding categories
1.1	Sex of the respondent	1. Male 2. Female
1.2	Your age in years?	----------
1.3	What religion are you following Currently?	1. Orthodox. 2. Protestant 3. Catholic 4. Muslim 5. Others(specify)----------
1.4	To which ethnic group do you belong?	1. Amhara 2. Oromo 3. Tigre 4. Others (specify)----------
1.5	What is your current marital status?	1. Never married 2. Married 3. Divorced 4. Separated 5. Widowed 6. Others (specify)----------
1.6	With whom do you live?	1. With father and mother. 2. With my mother only. 3. With my father only 4. With my grand father/mother 5. With relatives 6. With friends 7. Alone 8. Other (specify)----------
1.7	Fathers educational status	1. Illiterate 2. Read and write 3. 1-6 grade 4. 7-8 grade 5. 9-12 grade 6. Above 12 grade
1.8	Mothers educational status	1. Illiterate 2. Read and write 3. 1-6 grade 4. 7-8 grade 5. 9-12 grade 6. Above 12 grade
1.9	What is your father's occupation?	1. Daily laborer 2. Civil servant 3. Private employee 4. He doesn't work 5. Deceased 6. Don't know 7. Others (specify)----------

ID NO.----------

No	Questions	Coding categories

1.10	What is your mother's occupation?	1. Daily laborer 2. Civil servant 3. Private employee 4. She doesn't work 5. Deceased 6. Don't know 7. Others (specify)----------
1.11	How do you perceive your family economic status?	1. Poor 2. Moderate 3. Rich 4. Don't know 5. No response
1.12	Which grade are you currently in?	1. Grade 9 2. Grade 10. 3. Preparatory 4.Grade 12 5. Vocational training
1.13	Do you take religious subjects in your school?	1. Yes 3. Don't know 2. No 4. No response
1.14	Is there a radio in your household?	1. Yes 3. Don't know 2 .No 4. No response
1.15	If your answer is 'no' where do you listen to the radio?	1. Neighbors 2. I don't listen 3. Others (specify)----------
1.16	Is there a television in your household?	1. Yes 3. Don't know 2. No 4. No response
1.17	If your answer for 1.16 is 'NO' where do you watch television?	1. Neighbors 2. I don't watch 3. Others (specify)----------

PART TWO: SEXUAL HISTORY

No	Questions	Coding categories
2.1	Have you ever had sexual intercourse?	1. Yes 2. No—skip to Q 3.1.1 3. Don't know --skip to Q 3.1.1 4. No response-- skip to Q 3.1.1
2.2	At what age did you first have sexual Intercourse?	----------
2.3	What made you have first sexual intercourse?	1. I had personal desire 2. I was persuaded by friends 3. I was forced 4. I expected a gift from partner 5. Others (specify)---------- 6. Don't know 7. No response

ID NO.----------

PART THREE: COMMUNICATION

The following questions are concerned with communication about HIV/AIDS. Please respond to the questions either by circling the number of your choice or by writing the answer in the space provided accordingly.

3.1 SOURCES OF INFORMATION ABOUT HIV/AIDS

No	Questions	Coding category
3.1.1	Have you ever heard about HIV/ AIDS?	1. Yes 3. Don't know 2. NO 4. No response
3.1.2	When did you hear about HIV/AIDS first?	1. Since one year 2. Since two years 3. Since three years 4. Since four years 5.Since five years 6. Before five years 7. Don't know 8. No response
3.1.3	Think about the first time you heard about people being sick from AIDS. From which source did you get this information?	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)----------
3.1.4	Thinking about all the different things you've learned about HIV/AIDS in the past 12 months, who are your sources of information at your home since the last 12 months? (Circle all that apply)	1. Fathers 2. Mother 3. Brother 4. Sister 5.Grand mother/father 6.Radio 7. Television 8. News paper 9. others(specify)----------
3.1.5	Thinking about all the different things you've learned about HIV/AIDS in the past 12 months, who are your sources of information at school since the last 12 months? (Circle all that apply)	1. Teachers 2. Friends 3. Anti AIDS Clubs 4. Peer educators 5. No one 6. Others (specify)----------

ID NO----------

No	Questions	Coding category
3.1.6	Thinking about all the different things you've learned about HIV/AIDS in the past 12 months, who are your sources of	1. Friends 2. Elderly people 3.Community leaders 4. Religious leaders 5. Neighbors 6. Health professionals

	information out of your home and out of school since the last 12 months? (Circle all that apply)	7. No one 8. Others (specify)----------
3.1.7	Have you ever discussed with your parents about HIV/AIDS?	1. Yes 2. Don't know---please skip to Q 3.1.10 3. No response
3.1.8	If yes, who initiated the discussion?	1. My parents 2. My self 3. Others(specify)----------
3.1.9	During the last four weeks how often have you discussed with your parents about HIV/AIDS?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks 4. At least once in four weeks 5. Don't know 6. No response
3.1.10	Have you ever heard about HIV / AIDS on the radio?	1.Yes 3. No response 2. No ----please skip to Q 3.1.12
3.1.11	During the last four weeks how often have you listened to the radio about HIV/AIDS?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks 4. At least once in four weeks 5. Don't know 6. No response
3.1.12	Have you ever heard and watched about HIV / AIDS on the television?	1.Yes 3.Don't know 2. No --please skip to 3.1.14 4. No response
3.1.13	During the last four weeks how often have you watched to the television about HIV / AIDS?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks 4. At least once in four weeks 5. Don't know 6. No response

ID NO----------

No	Questions	Coding category
3.1.14	During the past four weeks how often have you read a newspaper?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks

		4. At least once in four weeks 5. Don't know 6. No response
3.1.15	Have you ever seen posters about HIV / AIDS?	1. Yes 3. No response 2. No-- please skip to 3.1.18
3.1.16	Who do you think the poster designers had in mind when they prepared the posters you have seen?	1. Someone exactly like me 2. Some one a little bit like me 3. Some one much different from me 4. Unsure
3.1.17	During the last four weeks how often have you got chance to see posters about HIV/AIDS?	1. At least once a week 2. At least once in two weeks 3. At least once in three weeks 4. At least once in four weeks 5. Don't know 6. No response
3.1.18	Have you ever seen leaflets about HIV/AIDS?	1. Yes 3. No response 2. No -- please skip to 3.1.21
3.1.19	If yes, from where were they delivered?	1. Health institutions 3. Anti AIDS Clubs 2. Schools 4. Others (specify)--------
3.1.20	During the last four weeks how frequently do you get leaflets about HIV/AIDS?	1. Every day 2. At least once a week 3.. At least once in two weeks 4. At least once in three weeks 5. At least once in four weeks 6. Don't know 7. No response
3.1.21	Is there Anti AIDS Clubs(AACs) in your school?	1. Yes 3. No response 2. No-- please skip to 3.1.25
3.1.22	What phrase best describes the messages delivered by the AACs?	1. Always clear and consistent 2. Some messages are clear and some are hard to understand 3. Most messages are hard to understand 4. Other (explain)---------- 5. Unsure

ID NO----------

No	Questions	Coding category
3.1.23	Are you member of the AACs?	1. yes 2. No 3.Do not know 4. No response
3.1.24	If your answer is no, why not?	---------- ----------

3.1.25	Are HIV/AIDS topics included in your curriculum?	1.Yes 3. No response 2. No -- please skip to Q 3.1.29
3.1.26	If yes what type of teaching method (s) are being employed?	1. Lecture 3. Both 2. Discussion 4. Others (specify)_____
3.1.27	During your lesson about HIV/AIDS in class were there opportunities for you to learn about how to use condoms?	1. Yes 3. Don't know 2. No 4. No response
3.1.28	During your lesson about HIV/AIDS in class were there opportunities for you to learn skills about how to:	
	make self decisions about sex	1. Yes 3. Don't know 2. No 4. No response
	express your feeling openly to others	1. Yes 3. Don't know 2. No 4. No response
	negotiate safer sex	1. Yes 3. Don't know 2. No 4. No response
3.1.29	Are there peer educators in your school?	1. Yes 3. Don't know 2. No - please skip to Q3.2.1 4. No response
3.1.30	Did you feel you could trust the peer educator to keep your conversation private?	1. Yes 3. Don't know 2. No 4. No response

ID NO----------

3.2 MESSAGES ABOUT HIV/AIDS

No	Questions	Coding categories
3.2.1	In your opinion, of all the information you got about HIV/AIDS, which source (s) of information had the ability to teach you about HIV/AIDS? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. None 12. Others (specify)----------

3.2.2	Of all the information you got about HIV/AIDS which source (s) of information messages was simple and understandable to you? (Circle all that apply).	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None
3.2.3	Of all the information you got about HIV/AIDS which source (s) of information transmit the messages which you actually need? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None
3.2.4	Of all the information you got about HIV/AIDS from which sources did you get timely (up to date) information? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None
3.2.5	Of all the information you got about HIV/AIDS which sources of information message was consistently delivered to you? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None

ID NO----------

No	Questions	Coding categories
3.2.6	Of all the information you got about HIV/AIDS which source of information message was(were) most helpful in responding to the challenges you routinely face? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None
3.2.7	Of all the information sources about HIV/AIDS which source message was(were) accessible to you in time and place? (Circle all that apply)	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)---------- 13. None
3.2.8	From which source of information were you interested to get messages about HIV/AIDS? Please write the number of your response in front of the given alternatives for those sources who stood in the rank 1-3.	1. Family 7. Television 2. Friends 8. Radio 3. Neighbors 9. Poster 4. School 10. Pamphlets 5. Church / Mosque 11. News paper 6. Health personnel 12. Others (specify)----------
3.2.9	How much, the information and education you got about HIV/AIDS contained the messages you expected?	1. Very high 2. High 3. moderate 4. Fair 5. Not at all 6.Don't know 7. No response
3.2.10	How much sufficient was the information and education you obtained about HIV/AIDS when it is compared with:	
	The knowledge you want to get about the disease	1.More than sufficient 2.Highlysufficient 3.Sufficient 4. Fairly sufficient 5. Insufficient 6. Don't know 7. No response
	The attitude you want to develop towards the disease	1. More than sufficient 2. Highly sufficient 3.Sufficient 4. Fairly sufficient 5. Insufficient 6. Don't know 7. No response
	The practice you want to acquire about the disease	1.More than sufficient 2.Highly sufficient 3.Sufficient 4. Fairly sufficient 5. Insufficient 6. Don't know 7. No response

ID NO----------

PART FOUR: PERCEPTION OF KNOWLEDGE, ATTITUDE, PRACTICE AND BEHAVIOR

The following questions are concerned about the effects of IEC messages you received about HIV/AIDS on your knowledge, attitude, practice and behavior. Please respond by circling the number or filling the space provided or by writing the number of their rank in front of the given alternatives.

No	Questions	Coding categories			
4.1	In the past 12 months, have you learned anything new about HIV/AIDS?	1. Yes 2. No 3. Do not know 4. No response			
4.2	If yes, what knowledge did you get? (Circle all that apply)	1. Causes of HIV/AIDS 2. Transmission mechanisms of HIV/AIDS 3. Prevention method of HIV/AIDS 4. Ways to assess my own risk 5. Others (specify)----------			
4.3	Which source (s) of information most helped you to increase your knowledge? Please write the number of your response in front of the given alternatives, in the order of importance to increase your knowledge about HIV/AIDS.	1. Parents------ 2. Peers --- 3. Religious leaders---- 4. Teachers---- 5.Health professionals 6.Anti AIDS Clubs---- 7. Television---- 8 Radio---- 9. Posters---- 10. Leaflets-- 11. News paper--- 12. Others------			
4.4	Through which of the following do you think HIV can be transmitted? Please indicate your response by marking this (✔) under the given alternatives.	Yes	No	Don't know	No response
	Shaking hands with people living with HIV/AIDS				
	Eating together with people living with HIV/AIDS				
	Using the same toilet with people living with HIV/AIDS				
	Having sex with someone who has the AIDS virus				
	Mosquito bite				
	Contaminated needle and sharp instruments with blood and blood products				
	Blood transfusion				
	From infected mother to fetus				
	From infected mother to her new born baby through breast feeding				
	Wearing cloths worn by people living with HIV/AIDS				
	Others				

ID NO----------

4.5	How can HIV/AIDS be prevented? Please indicate your response by marking this (✔) sign under the given alternatives	Yes	No	Do not know	No response
	Abstinence				
	Correct and consistent use of condoms				
	Avoid using unsterile needles				
	Avoid any contact with HIV infected people				
	Having good nutritional status				
	Avoid mosquito bites				
	Having sex with only one uninfected faithful partner				
	Using screened blood				
4.6	Does AIDS have cure?	1.Yes 2. No 3. Don't know 4. No response			
4.7	Is there a proven vaccine to the public that protects a person from getting HIV	1.Yes 2. No 3. Don't know 4. No response			
4.8	Did the information you received about HIV/AIDS change your previous attitude?	1.Yes 2. No 3. Don't know 4. No response			

4.9	In the past 12 months, have you experienced any changes in the following?	Yes	No	Unsure	No response
	1.Belief about personal vulnerability with HIV/AIDS				
	2. Commitment to abstain from sex				
	3. Commitment to delay sex				
	4. Commitment to use condom correctly				
	5. Confidence to discuss about sexuality				
	6.Susceptibility of HIV/AIDS				
	7. Commitment to decrease number of sexual partners				
	8. Commitment to have only one faithful partner				
	9. Positive feeling towards People Living				
	10. Others (Specify)----------				

ID NO----------

No	Questions	Coding category
4.10	Referring the issue for which you reported "yes" in 4.9, which source (s) of information most helped you to change your previous attitude? Please write the number of your response in front of the given alternatives in the order of usefulness to change your previous attitude.	1. Parents------ 7. Television---- 2. Peers --- 8 Radio---- 3. Religious leaders---- 9. Posters---- 4. Teachers---- 10. Leaflets-- 5.Health professionals 11. News paper---- 6.Anti AIDS Clubs---- 12. Others------

4.11	How much do you agree on the following points? Please indicate your response by marking this (✔) sign under the given alternatives	Agree	Not sure	Disagree
	a. A person who looks healthy could transmit the AIDS virus			
	b. A person with multiple partner has more risk than a person with one partner			
	c. Sex with condom is not enjoyable			
	d. Even if I don't protect myself there really is practically no chance I could get AIDS			

4.12	How comfortable are you to do each of the following? Please indicate your response by marking this (✔) sign under the given alternatives	Comfortable	Neutral	Uncomfortable	Do not know	No response
	a. Caring for someone who have AIDS					
	b. To live with some one who have HIV/AIDS					
	c. To eat with some one who have HIV/AIDS					

ID NO----------

4.13	How hard would it be for you to do each of the following in the next three months:	Very hard	Fairly hard	Fairly easy	Very easy	No response
	a. Abstain from sex					

	b. Ask sexual history of a new partner					
	c. Buy condoms					
	d. Discuss using a condom before having sex					
	e. Use a condom					
	f. Refuse to have sex with the person if he/she won't use a condom					
	g. If condom is not available to stop sexual activity					

4.14	Did the information you obtained about HIV/AIDS improve your practice?	1.Yes 2. No 3. Don't know 4. No response
4.15	If yes, what are the practices you improved? (Circle all that apply)	1. Abstain from sex 2. Correctly and consistently use condoms 3. Avoiding injection by unsterile instruments 4. Avoiding casual contacts with people with HIV/AIDS 5. To decrease number of sexual partners 6. To stick to one faithful partner 7. Others (specify)----------
4.16	Which source (s) of information most helped you to change your previous practice? Please write the number of your response in front of the given alternatives in the order of usefulness in changing your practice.	1. Parents------ 7. Television---- 2. Peers --- 8 Radio---- 3. Religious leaders-- 9. Posters---- 4. Teachers---- 10. Leaflets-- 5.Health professionals 11. News paper--- 6.Anti AIDS Clubs---- 12. Others---
4.17	Have you had sexual intercourse in the last 12 months?	1. Yes 2. No—Please skip to Q 5.1 3. Don't know- Please skip to Q 5.1 4. No response -Please skip to Q 5.1
4.18	How many sexual partners did you have in the last 12 months?	1. Only one partner 2. Two to five partners 3. More than five partners
4.19	How many of them were regular partners (some one with whom you have been having sex with for at least 3 months).	----------
4.20	How many were non-regular partners(some one with whom you have been having sex for less than 3 months	----------

ID NO----------

No	Questions	Coding category
4.21	How many were commercial (partners with whom you had sex in exchange for money).	----------

4.22	In the past 12 months of sexual intercourse did you and your partner (s) use a condom.	1. Yes 2. No—please skip to Q 4.24 3. Don't know 4. No response
4.23	With what frequency did you and your partners use a condom during the past 12 months?	1. Every time 2. Almost every time 3. Sometimes 4. Never used
4.24	Why didn't you and your partner use a condom that time?(circle all that apply).	1. Not available 2. Too expensive. 3. Partner objected 4. Don't like them 5. Used other contraceptive 6. Have trust on partner 7. Didn't have reason to use 8. Didn't think of it 9. Others----------

PART FIVE: PREFERENCES OF SOURCES OF INFORMATION, MESSAGES AND CHANNEL

5.1	By whom do you want to be taught about HIV/AIDS?	1.Parents 7.Television 2.Peers 8.Radio 3.Religious leaders 9.Posters 4.School subjects 10.Leaflets 5.Anti AIDS Clubs 11.News paper 6.Health professionals 12. People living with HIV/AIDS 13. Poem 14. Others------- ----------
5.2	How do you think information related to HIV/AIDS be communicated to you.	1.Song 4. Speeches 2.Drama 5. Discussion 3.News 6. Others----------
5.3	List three things you would still like to learn about HIV/AIDS?	_____ _____ _____
5.4	If you want to be taught by radio or television which day and time is convenient to you?	---------- ----------

FOCUS GROUP DISCUSSION GUIDE

1. What is HIV/AIDS? How do you and other in-school youth define HIV/AIDS?
2. What are the common beliefs about HIV/AIDS? Probe for the cause, modes of transmission and protective mechanisms of HIV/AIDS.

3. What are the sources of HIV/AIDS related information to you and other in-school youth?

4. Would you comment on the usefulness and sufficiency of HIV/AIDS information provided by different media channels (parents, friends, religious leaders, teachers, health professionals, Anti AIDS Clubs, peer educators, television, radio, news paper, posters, leaflets)?

5. In your and other in- school youth opinion how far do you think the IEC materials were able to influence knowledge, attitudes and behaviors related to HIV/AIDS? Discuss the contribution of each type of IEC material in terms of knowledge, attitude, and belief concerning HIV/AIDS.

6. What are the barriers, which hinder youth from behavioral change?

7. How do you think and by whom do you think should information related to HIV/AIDS be communicated to youth? Would you like to suggest the preferable methods?

8. Do you have anything that you would like tell us about HIV/AIDS in relation to the in- school youth?

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