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Health Problems and Service Preference of School Adolescents in Addis Ababa With Emphasis on Reproductive Health.

By

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Dedicated to

Betre & Brooktawit

Who sacrificed the most, to my study and
thesis work,
at such an early age of five and two.

TABLE OF CONTENTS

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LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

AA	Addis Ababa
AAU	Addis Ababa University
AIDS	Acquired Immune Deficiency Syndrome
ARH	Adolescent Reproductive Health
ARHS	Adolescent Reproductive Health Service
CSA	Central Statistics Authority
ENT	Ear Nose Throat
FGD	Focus Group Discussion
HSDP	Health Service Development Program
MOH	Ministry Of Health
NOP	National Office of Population
RH	Reproductive Health
RHP	Reproductive Health problem
SRH	Sexual Reproductive Health
SRQ	Self Reported Questionnaire
STD	Sexually Transmitted Disease
TGE	Transitional Government Of Ethiopia
UNICEF	United Nation Children's Fund
UNFPA	United Nations Population Fund
WHO	World Health Organization

ABSTRACT

A cross-sectional descriptive survey to assess adolescents health related problems and service utilization pattern and preferences was conducted from January to December 2000 in randomly selected school adolescents in Addis Ababa. Data were collected using an anonymous self-administered questionnaire.

A total of 2647 high school students from 13 schools participated in the study. Of theses 1177(44.5%) were males and 1470(55.5%) were females. Five hundred fifty eight (21.9%) adolescent reported to be sexually active. Condom use during the last intercourse among the sexually active was 72.9%. Forty-four (7.9%) of the sexually active adolescents claimed to have had symptoms of STD in the past three months. Among the sexually active female, 32 (5.7%) claimed to have been pregnant out of which 22 (68.8%) ended up in abortion. Overall 1045 (39.5%) of the students reported the use of at least one of the substances (alcohol, cigarette, kaht or cannabis); 1229(51.6%) had mental distress, and 284(10.9%) had attempted suicide in the past. Seven hundred eighty three (32.3%), 523(24.5%) and 610(25.9%) of the adolescents claimed that the existing reproductive health services are inaccessible, unaffordable or unacceptable respectively for adolescents. For 1852(72.0%) of the adolescents feeling of embarrassment at seeking reproductive health service was the reason for not utilizing existing service while 1738 (67.8%) claimed it was for fear of being seen by parents or others. The majority 1402 (57.0%) claimed that service fees are unaffordable for adolescents. Five hundred fifty two (21.6%) preferred to have ARHS with in the existing system but with special approch to adolescents by service providers, while 1070(41.9%) in separate setting outside of the existing service including youth centers.

It was concluded that adolescents have specific health problems, risk taking and care seeking behavior that have not been well addressed by the existing health services. Hence recommended that organizing youth friendly RHS be given an urgent attention by decision makers, public health planners and health care providers at all levels.

I. INTRODUCTION

Adolescence is transitional period from childhood to adulthood, characterized by significant physiological, psychological and social changes. The local definition of adolescent, as it is a cultural phenomenon, differs among societies and cultures. However WHO/UNFPA/UNICEF defined adolescents as those in the age group of 10-19 years (UNFPA 1998). This group of population constitute about one fifth of the worlds population, with four out of five living in the developing countries.

From traditional medical perspective, adolescents having survived all childhood health problems and with low morbidity rates from organic diseases that affect adults enjoyed particularly good state of health. However, changing conditions due to civilization and urbanization are bringing about changes in behaviors that have caused a decline in their health status (Hoffman 1989; WHO 1999). Among those changes are decreasing age of menarche, rising age of marriage in many countries, changes related to expanded education, broadening opportunities for women like school enrollment and employment, changing economic conditions and high rates of unemployment in the general population, increased exposure to media and modern communication etc. (Sendreowitz 1997; WHO 1999).

All these increases the transitional period from childhood to adulthood, which used to be marked by rapid reproductive maturity in traditional societies, further predisposing them to an increase in early and non-marital sexual activity. In addition to these, the adolescents' risk taking and experimentation behavior make them more vulnerable to increased sexual activities and all its consequences. On the other hand, adolescents

face fear, lack of concern, information and understanding about their own needs, to tackle their health related problems the right way (Hoffman 1989; WHO 1999; Senderowitz 1997).

Presently, the common health concerns of adolescents are sexual-reproductive health problems, life style and risk taking behaviors, mental - emotional related problems and problems associated with injuries (WHO 1999).

However, despite the specific nature and the rising health needs of this group of population, the response from all concerned including the health sector is only emerging. For example in the health sector, there is no health service or counseling specifically suitable for this age group like that of children, mothers or adults (Berhane 1999). The existing health services in particular RHS primarily focus on older and married people (Pathfinder 1999, Senderowitz 1997).

The issue of adolescents was for the first time given the necessary attention and discussed on the International Conference for Population Development in 1994 in Cairo. The principle endorsed by the ICPD then to be implemented by all participating governments including our country was that; *young people not only need but also have the right to reproductive health information and service* (UNFPA 1998; WHO 1998). In Ethiopia to date there is no adolescent policy. Though it is indicated in the health policy (TGA 1993), that addressing the health problems and needs of adolescents as an issue and the Family Health Department of MOH is undertaking some initiatives, practical activities are not yet visible at public health service delivery points. Therefore in the absence of overall adolescent policy and clear strategies and practical activities towards

addressing adolescent reproductive health issues, the escalating health problems of adolescents, especially in the catastrophic HIV/AIDS era can not be addressed effectively.

In such a situation then, what do adolescents do in response to their major health problems especially the sensitive ones like sexual and reproductive health related? How do adolescents utilize the existing health services? What are their attitudes towards these services? What are their preferences for the future? Few studies in different parts of our country have shown the magnitude of different problems and the knowledge, attitude and practice of adolescents on selected RH issues (Fantahune 1995; Ismail 1995; Taffa 1998; Kora 1999). However, it is also important to see the most important RH problems in broader sense with other adolescent problems like substance use, mental distress and suicide attempts; with their actual health service utilization patterns. Further the assessment of their health service preferences is also useful in organizing youth friendly services in the future. Hence, this research was launched to contribute in filling this gap.

II. LITERATURE REVIEW

1. Background

Adolescence comes from a Latin word "adolescere" which means to grow up. It is a cultural phenomenon unique to each civilization or society. On the other hand puberty is a biologic process universal to children everywhere (Hoffman 1989). Hence, the definition of adolescence especially that of youth has been changing in response to fluctuating political, economic and socio-cultural circumstances. Because of this WHO/UNFPA/UNICEF jointly defined adolescents to be those in the age group 10-19 years, youth in the age group15-24 years and young adults in the age group10-24 years (UNFPA 1998).

More than half of the world's population is below the age of 25 and one fifth of the world population is between the age of 10-19 years and four out of five young people live in developing countries (WHO 1999). In Sub-Saharan Africa it is estimated that 10-24 years old group is about 200 million (Pathfinder 1999). In Ethiopia according to the 1999 population profile, adolescents in age group10-19 years are about 15 million, which is about 24% of the total population of the country (NOP 2000).

When we see adolescence from a different perspective, biologically it is the second rapidest period of growth after infancy. Through time, improved socioeconomic standard and nutrition has resulted in more rapid growth manifested by decreasing age of

menarche that makes teenagers physically capable of reproduction and to work and looking like adults early (Hoffman 1989).

From historic perspective, adolescence in its present form is a cultural phenomenon, a by-product of civilization, which is relatively new occurrence. In ancient Greek, Plato thought the primary task of the youth was to develop rational thinking, and Aristotle thought it was learning to make choice. In colonial America children were sent out from their homes as soon as they were able to work achieving semi or complete independence and were expected to contribute to the family's support (Hoffman 1989).

After the 19th century school reforms, the need to give moral guidance to children raised and they required prolonged time for nurturance and protection and parents assumed increasing responsibility for raising them properly. Thus the concept of adolescence begun to fully develop in the early 1900s with compulsory education, child labor legislation, juvenile justice system serving as the boundary between child, adolescent and adult emphasizing the special nature of adolescents (Hoffman 1989).

Through time, with progressive civilization, urbanization and migration, the parental role started to be influenced by socioeconomic factors like increasing women working, more families having both parents working, increasing divorce rates resulting in single parenthood, meaning adolescents became increasingly free of parental guidance and constraints. This in turn resulted in peers to play more significant roles than ever before (Hoffman 1989; WHO1999; Senderowitz 1997).

In traditional rural societies smooth transition from childhood to adulthood is demarcated through one traditional rite of passage mainly indicating sexual maturity. This could coincide with menarche, clitoridectomy and/or early marriage for females; circumcision or separation from family for boys. But in urban societies, on the other hand, there is no clear demarcation and the transition period is extended. Usually incomplete rites of passage like, separation from parents for school or work to urban centers, dating, attending ceremonial drinking, obtaining driver's license, voting, may lead teenagers to believe falsely that they are adults (Hoffman 1989).

Thus, adolescence becomes a process of breaking away into superego, with parents and adults increasingly being absent from home and peer group assuming more roles. In the mean time, adolescents develop sense of idealism of being misunderstood, further complaining that adults fail to see every part of them. They are often egocentric as they try to piece together adult personality and achieve adequate level of self-esteem. They are ambivalent about their roles sometimes acting older or younger without many cultural cues to guide them. These universal symbols of adolescents may force them into harder choice to define themselves. On the other hand, the role of ambivalence together with the combination of idealism and egoism can prove very confusing for many adults in understanding adolescents (Hoffman 1989).

Therefore, in general, the enormity of adolescence as the combination of rapid physical, psychosocial growth, psychological stress, parental and peer pressure, media information and misinformation etc. can predispose adolescents to myriad of

problems for which they may need the appropriate care at the right time from variety of providers.

Today, more than any other time in history, the health, attitude values and actions of adolescents will define the future of their societies. Because of this many societies are engaged in their own rapid transitions, through all the challenges in providing the young generation with the information, service and options necessary to make adolescence a time of opportunity rather than time of risk (ICRW 2000).

2. Health problems of adolescents

Among the health problems and health related behaviors particular to adolescents indicated by WHO, sexual and reproductive health related, psycho-social disorders like mental distress, suicide; risk behavior related to substance use and abuse are the most common ones (WHO 1999).

2.1. Adolescent Reproductive Health Problems

Nowadays, due to urbanization, modernization, migration and easy communication and media effect, there is some pattern of adolescent sexual and reproductive behaviors and problems through diverse cultures (Pathfinder 1999; Senderowitz 1999). The reproductive health crisis facing young people arises basically from the increase of early and premarital sexual behavior resulting in problems of teenage pregnancy, illegal abortions and STD- HIV/AIDS.

2.1.1 Teenage sexual activity:

The traditional systems of preparation for adult life is disappearing resulting in loss of parental and community guidance in the area of sexuality while on the other hand, the subject adolescent sexuality is still a taboo in many places. And this left adolescents without the information and counseling they need. They get their first information about sexuality from their peers whose views are often inaccurate and based on rumors and personal experiences (Pathfinder 1999; Senderowitz 1997). Hence, adolescents often become sexually active at early ages without knowing the risks associated with unprotected sexual activity resulting in risks of teenage pregnancy, unsafe abortion and STDs–HIV/AIDS (Out Look, 1998).

The percentages of those having sex before marriage is higher in the developed countries as compared to the developing countries and it is getting higher all over the world. More than 80% of adolescents had their first sexual act before the age of 20 in most of the developed countries of Europe and America (Blum 1991; WHO 1993; Alan Guttmacher Institute 1999; Makwendini, 2000).

Among the developing countries, in Brazil 54% of men had experienced sex at the age of 15-17 years while in Korea this proportion is 16% of men and 5% of the female. Among African countries, in Ghana, 12% of teenagers had sexual relation by age 15 and among adolescents of 15-19 years 59% were sexually active. In Sub Saharan Africa the age at first sexual intercourse ranges from 16-17.6 years (Blum 1991; Pathfinder1999). In Ethiopia different studies in different parts of the country revealed the mean age at first

sexual debut to be between the age of 15.3 to 19 years (Bisrat 1994; Fantahun 1995; Ismail 1995; Taffa 1998; Kora 1999).

2.1.2. Teenage Pregnancy:

Teenage pregnancy is mostly not planned and child bearing to girls in early adolescence has increased health risks as well as social and economic problems (Kulin 1988). For urban adolescents, pregnancy is mostly extramarital and almost always ends up in abortion (WHO 1999). In developing countries, up to 60% of pregnancies in teenage are unwanted (Out Look 1998). In South Africa pregnancy rate among women under 20 was about 33% and in Sub-Saharan Africa one out of five female adolescents gives birth every year and above 100 births out of 1000 are to adolescents of age 15-19. The risk of death in childbirth is five times higher in 10-14 year olds than the15-19 year olds and, in turn twice as high among the 15-19year-olds than 20-24 year olds (Senanayake 1994; Pathfinder 1999; UNFPA 2000; Makwedini 2000).

In Ethiopia the magnitude of unwanted pregnancy among adolescents was reported to be 15% in Harar (Kora 1999); 30.1% in Gonder (Fantahune, 1995) and 50% in Kola Deba (Ismeil, 1997).

2.1.3. Abortion:

Abortion is almost always the response to unwanted pregnancy especially among adolescents. This is done safely in the developed world where it is legal. But in the developing countries where it is illegal and performed in unsafe clandestine conditions,

morbidity and mortality due to its complications are very high (WHO 1999; Blum 1991,The Alan Guttmacher Institute 1999).

About 46 million abortions were performed worldwide in countries with restrictive laws and non-restrictive laws in 1995, making the worldwide abortion rate to be 35 per 1,000 in the age group 15-44 years. Out of these, 26 million were legal and 20 million were illegal. Sixty four percent of the legal and 95% of the illegal abortions takes place in the developing countries (Stanley 1999). Worldwide as many as 4.4 million abortions may be sought every year by adolescent girls (The World Youth 1994).

In Nigeria 50-70% of women hospitalized for complications of abortion were younger than 20 years. A 13-year review at a university hospital in Nigeria revealed that 72% of maternal deaths from unsafe abortion were accounted by teenage women (Unuigbe 1988).

In Ethiopia, a study in Jimma Hospital on illegal abortion revealed that 57.5% of the cases to be in the age group 15-20 years, out of which 35% of them were students (Kebede 2000). Another study from Gambella hospital showed, among all gynecological admissions, 70% of the cases were abortion related. Out of these adolescents of 15-19 years constituted 26.8%and 28.4% of the induced and spontaneous abortion cases respectively (Meskel 1999). In an unpublished study involving 5 hospitals in Addis Ababa in 1992, among 2275 cases of abortion, 56% were induced, among which 90% were in the age group 15-30 and 27% were students. Thus, 25% of all cases and 30% of the deaths due to the abortion complication were found to be adolescent girls under the age of 20 (Yosef 1992). In

a community-based study in A. A. it was found that 74% of the sexually active adolescents had illicit abortion some times in the past (Tadesse 1996).

2.1.4. STD and HIV/AIDS:

In the era of HIV, lethal dimension is added to the problem of STD. WHO estimated that 5% of all adolescents contract STD yearly. The incidence of STD is highest among 20-24 year olds followed by 15-19 year olds, where by young women of 15-19 years are affected more than young men, with high rates among people from lower income group and prostitute (WHO, 1997).

In Sub Saharan Africa, it is estimated that about 10-20 percent of the sexually active to have STD (Pathfinder 1999). Among the 33.4 million people affected by AIDS at the end of 1998, about one third were young people in the age group 15-24. In 1998 alone about 3 million young adults became infected with HIV. It is estimated that every day about 7000 young people acquire the virus. About 95% of the world HIV infections occur in the developing countries, out of which around half is in this age group, when most people start their sexual lives (UNAIDS 1999).

In Ethiopia, the magnitude of STD is masked by self-treatment practice. However, among reported cases, a survey on HIV and syphilis sero-prevalence among antenatal care attendants, indicated that syphilis sero-prevalence was 8.8% and HIV prevalence from the total population was 13.6% and 10% among 16-17year olds (Meherete 1996). Among the out of school adolescents in Awassa, STD was found to be 6.5% in 1995 and 4% in 1998 (Mengeste 1995; Taffa 1998).

In Ethiopia, in 1994 in a randomly selected 0-49 years study population of Addis Ababa, HIV prevalence was found to be 6.0% and 6.9% in adult males and females respectively. Among the age group 15-19, the prevalence was 3.3%. During this study there were no infection in the age group 6-13. The HIV prevalence estimates were updated through years by different studies ranging 10%-23% in the general population and 45% to 74% among sex workers. According to the MOH 1998 report the prevalence in the general population was estimated to be 7.4%. The peak age for AIDS cases were 20-29, and the peak age for new infections were15-24 years (MOH 1998; Fontanet 1999)

2.1.5 Protective Contraceptive use:

Though knowledge about contraception is found to be high in different studies the level of contraceptive use among adolescents is often very low for different reasons (Eshetu 1994; Fantahun1995; Gebre 1995; Ismail 1997; Teka 1997; Kora 1999). Among the reasons could be, insufficient or incorrect information; limited access, cost, social or cultural barriers; low social status and decision-making power (Senderowitz 1995).

In Ethiopia in a nation wide survey among young adults aged 15-29 years, knowledge about contraception was found to be as high as 90% and 87% for condoms and pills, respectively. But when it came to practice, only 15% of the males used condom and 39% of the females used pills (Gebressilasse 1996).

2.2 Substance use

In recent decades mind-alerting and psychotropic drugs such as tobacco, alcohol, marijuana and kaht are used and abused altering the culture in which children mature. Thus, confronting and coping with the health consequences of these substances that are easily available to the youth has been one of the most important medical problems of our times (Hoffman1989; Gebressilasse 1995).

In the developed world, during the last quarter of century, drugs have invaded the society especially the youth. Presently it is also in rapid spread in the developing world including our country due to urbanization and exposure to western life style. Large number of youth somehow decides daily whether or not to use drugs with out adequate knowledge (Hoffman 1989; Blum 1991).

In the USA, by the age 11 one in five adolescents has smoked cigarette, one in eleven had his first drink and by the age 15 one in seven adolescents had smoked on daily bases and one out of three adolescents had drunk excessively (Arthur 1994).

In Ethiopia, the use of alcohol, kaht and tobacco is not new, unlike marijuana which is new in urban settings. Drugs like cocaine and heroine are very rare (Gebressilasse 1995). Kaht chewing which was traditionally common among the Muslim population is now spreading everywhere. Among the youth in educational institutions, it is believed to sharpen the mind and bring issues in to sharp focus and students rely on it and among the out of school youth it is widely used for elevating mood and to pass time.

In a rapid assessment of the situation of substance abuse in selected urban areas in Ethiopia, the age at first use was found to be in 44.9% cases at less than 15 years and 34.6% at the age of 15-19 years (Gebressilasse 1995). A study on drug use among high school students in Addis Ababa revealed, the magnitude of ever use of alcohol to be 17.9% and 57.8%; that of kaht 9.2% and35.6%; cigarette 5.1% and 48.9% and Cannabis 1% and 31.1% in government and private high schools respectively (Kassaye, 1999).

2.3 Mental distress and suicide attempt

Adolescence as a period of storm and stress and with all the vulnerabilities mentioned above has an effect on the mental status of adolescents. This is seen from two aspects, the first being problems arising from mutual relationship between adolescents and family, society, and school. This is usually manifested by wide scale rebellion against the existing family norms, social customs educational systems and so on leading to crisis of modern adolescents. The second aspect of the mal adaptation embraces psychological disturbances of the individual due to socio-psychological and biological causes (WHO 1971).

Globally suicide is the second major cause of death among young people. For young people generally suicide rate has tripled during the past 30 years moving it to front ranking public health challenges. In the USA one in four adolescents in grades 9-12 have thought seriously about suicide and one in twelve have actually attempted suicide (Arthur, 1994; Borges 1995).

In a community based study in Addis Ababa, mental distress among the age group 15-24 years was found to be 6.8% of the study population (Kebede, 1999). And in Awassa, the prevalence of neurosis was found to be 6.8% and psychosis 2.4% (Mengeste 1995).

A study conducted among high school students in Addis Ababa showed 14.3% adolescents to have had attempted suicide in the past (Kebede 1993). Among the adolescents in Awassa community, attempted suicide by adolescents was found to be 3.43% (Mengeste 1995).

3. Adolescent Health Service:

The life style and reactions of adolescents vary from those of adults. Little or nothing will be accomplished on examination from the usual patient - physician relationship and confrontation with adolescents. The adolescents who are trying to find their identity and independence cannot be expected to modify their developmentally driven resistance when they come to health services. The health service providers must be the ones to change, through training or in-service self-awareness sessions of any rigid, judgmental position or defensive and stereotypic expectations concerning adolescent's behavior. Usually teenagers respond well if approached in an individualized collaborative and negotiated manner. Therefore, the goal of any health provider's contact with adolescent should be to complete his physical and psychosocial evaluation in the atmosphere of trust and confidentiality. This will enable to successfully attract, serve and retain the young clients (Senderowitz 1999; Hofman 1989). Mostly adolescents prefer to obtain health care with their own age

groups and in some selected time of the day or weekends while others are not around. By decorating the settings with teen oriented posters and reading materials, they feel that the providers understand their uniqueness and they prepare themselves to respond accordingly (Senderowitz 1999).

Even if adolescents come to health services for the first time with parents with specific problems, the provider should talk to them individually encouraging them to return at frequent intervals and whenever they have the need by themselves. In doing so, the major concern would be the service fee. Since the first visit probably require more time reasonable charge may be justified. However, ongoing frequent visits need to have especially low fees or even be free for adolescents (Hoffman 1988; Sendrowitz 1999).

In a study in Caribbean, young people discussed, an ideal center to be, one that offers as many services, open in the afternoons and evenings, with empathetic, knowledgeable and trustworthy providers and does not look like a clinic (Kurt 1995). According to other studies in Nicaragua and Kenya, young people wanted confidential services preferably outside of their local areas, good human and trustworthy treatment by specially trained for youth providers in centers especially for young people (Marie Stops International, 1995). These issues were also emphasized by Weisse and Herz (Weisse 1996; Herz 1998).

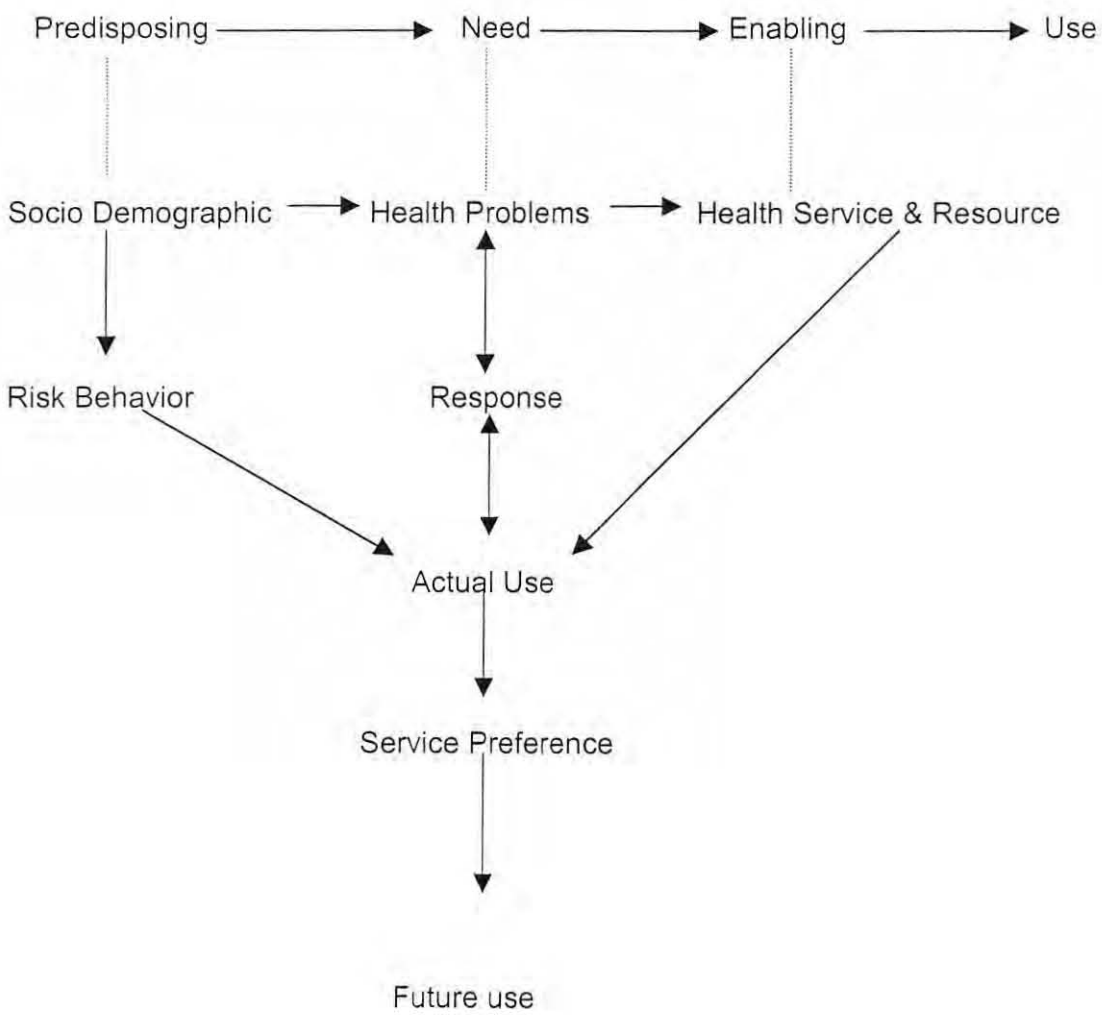
By fulfilling the preferences of adolescents, youth friendly services that have policies and attributes that attract youth; health facilities can provide comfortable and appropriate

services that meet the need of adolescents and retain them for follow up successfully (Senderowitz 1999).

The conceptual framework adopted for this study is based on Anderson's model of health service utilization, which consists of the predisposing, need and enabling factors (Anderson, 1968) with some modification, by adding other components of service preference and future use.

Thus, according to this framework the predisposing factors would be assessed by the socio demographic variables and the risk-taking behavior (substance use) of adolescents. The predisposition leads to development of the need, which will be measured by the magnitude of the common RH problems, mental distress and suicide. The proposition of this study is that enabling factors in terms of health service for adolescents are not properly in place. Since most services are targeted to mothers and children or adults, assessing the attitudes and utilization pattern of these health services by adolescents and their preferences for future use would be relevant. The results of such an assessment would be an important input for future efforts to organize appropriate service for this particular segment of the population.

Conceptual Framework for Health Service Utilization by Adolescents



III. OBJECTIVES

General:

To assess the common health related problems, health services utilization and the preference of school adolescents in Addis Ababa.

Specific:

1. To determine the magnitude of selected reproductive health related problems, (sexual activity, pregnancy, abortion, STDs and contraceptive use)
2. To determine the magnitude of substance use (tobacco, alcohol, khat, cannabis)
3. To determine the magnitude of mental distress and attempted suicide
4. To identify selected factors influencing adolescent's reproductive health problems.
5. To describe the adolescent's actual health service utilization patterns and preference.

IV. METHODOLOGY

1. Study Design:

The study employed descriptive cross-sectional survey design to assess major health-related problems, and to characterize health service utilization patterns and preferences of school adolescents in Addis Ababa.

2. Study Area

The study was conducted in Addis Ababa, the capital city of Ethiopia. It is located between 9 degrees latitude and 38 degrees East longitude in a plateau that stretches at the range of 2200-2800meters above see level. It has a projected population of 2.6 million by the year 2000, with a sex ratio of 0.94. The adolescent population 10-19 year olds, constitutes 761,320 (29 %) of the city population, out of which 348,609 (45.8%) are males and 412,711 (54.2%) females (CSA for A. A. 1994). Considering the urban-rural distribution of the city, the urban part of the city constitutes 56,1% of the total area and 98% of the population of the city. Addis Ababa is divided into 6 zones, 28 districts and 328 kebeles in the urban part of the city and 23 farmers associations in the rural part. (Kebele is the smallest adminstrative unit with an average population of 5000-7000). The population of the city is not evenly distributed over the six zones and so do different institutions like schools and health facilities. Every government institution has branch office at the zone administration level, which is responsible for every activity in the districts and Kebeles under it.

The major ethnic composition of the city shows that 48% of the population to be Amhara 19.2% Oromo, Gurage 13.5% and 7.6% Tigray. With regards to religion, the overwhelming majority is Orthodox Christians 81.8%, followed by the Muslim population 12.7% (CSA A.A, 1994).

The following are some of the health status indicators of the city: Crude birth rate is 15.7% per 1000, crude death rate 7.8 per 1000, infant mortality rate 78 per 1000, child mortality rate of 108 per 1000, maternal mortality of 566 per 100,000 and life expectancy at birth of 60.3 for females and 56.6 for males (though latest figures are not available, life expectancy has lowered because of HIV/AIDS). The major health problems of the city are communicable diseases like the other places in the country (HSDP, 1997).

3. Study Population:

The source population was all secondary school students in the city of Addis Ababa. The target population was all senior secondary school students enrolled in the year 1999/2000, a total of 129,950 students. In the city there are 41 senior secondary schools, out of which 23 are government schools, 10 mission, 6 foreign community schools and 2 categorized under others - prison and orphan schools.

The foreign community schools are not under the Ministry of Education and students are mainly foreigners with very few Ethiopians presently. The schools in the prison, orphanages are in special confined places only for those who live in the respective organizations. The private schools are independent of the ministry of Education and almost all are mission schools. There are three girls', one boys' and six mixed private schools. The Muslim school though categorized as mixed for boys and girls,

internally functions under strict Muslim regulations and do not mix the male and female students in classrooms.

The Government schools are distributed unevenly in the city; in some zones there is only one high school while in others there are up to five schools under the respective Zone Education Bureau. Students are generally assigned to the near by school from their residence area by Education Bureau authorities.

Inclusion Criteria:

All schools primarily established for Ethiopian students in the city of Addis Ababa, without special nature or regulation that makes them different from regular schools.

Exclusion Criteria:

The following categories of schools were excluded due to their peculiar nature:

1. The schools with special student population such as the prison and orphans.
2. Muslim school with strict religious rules.
3. Boarding school
4. Foreign community schools.

Individual students who were not able to complete the questionnaire without assistance such as the blind were also excluded from the study.

4. Sampling Procedure

A multistage sampling technique schematically presented in Fig.3, was employed in order to select a fairly representative sample of students in Addis Ababa. Below, the sampling procedures are described in detail:

First stage:

1. All high schools were identified by name and category
2. High schools were stratified by ownership into government and private schools.
3. Government schools were further stratified by their geographic/ administrative area location into 6 six zones.
    - 3.1. Except in zone 1 and 6, from which the only one school was taken, two schools were selected randomly from each zone taking into account the size of student population.
    - 3.2. In government schools with two shifts of education, the survey was conducted in a randomly selected shift (The distribution of grades is similar in both shifts).
4. Private high schools were stratified as mixed, girls only and boys only. Then one school was selected at random from each category. There was no shift system in the private schools.

Second stage:

1. The total sample size was distributed to the selected schools proportionate to their student population size.
2. The number of respondents calculated for each school was divided equally into three grades; 9th, 10th and 11th. Grade 12 students have completed their education by the time of the survey and were not available for interview.
3. From each grade, one section was selected randomly.
4. All students in the selected sections were then invited to participate in the survey.

5. Sample size:

Sample size was calculated using EPI Info computer program. Calculations were made separately for the government and private schools.

For the government school the following assumptions were made: expected prevalence of health-related problems of 50%, design effect of 2, desired precision of 3% and 95% confidence level. Accordingly from the total population of 123,785 government school students, the required sample size was 2117.

For the private schools the following assumptions were made: expected prevalence of health-related problems of 50%, design effect of 1, desired precision of 3% and 95% confidence level. Accordingly from the total population of 6200 private school students, the required sample size was 911.

The over all sample size including both government and private schools was 3028. Such very conservative estimate was made due to lack of more precise information and to obtain a bigger sample size to compensate for non-responses and absentees.

6. Data collection

Questioner Development:

In the absence of specific adolescent health services and scarcity of information on the health seeking behavior of adolescents and their future preferences, getting deep insight and soliciting the feeling of the adolescents in sensitive issues of reproductive health matter and their care seeking patterns was believed to be of great help.

Therefor with the general objective of formulating and enriching the questionnaire for this study, a focused group discussion (FGD) was undertaken.

The Focus Group Discussion:

1. Four focus group discussions, two with male and two with female adolescents, were conducted. In each group, 8 adolescents identified from school and out of school adolescents participated in the discussion. Out of school adolescents were included to capture wider opinions about adolescent's health-related problems in general. The discussions were moderated using a pre-prepared discussion guide, which was pre tested with adolescents from school not included in the survey. A moderator of the same sex conducted the FGDs in a private and quite environment. The discussions on average lasted for one hour. The FGD was fully taped recorded and notes were taken by the moderator's assistants.

The following points were important lessons learned from the FGD:

1. Stress, suicide ideation, sexual reproductive health problems, and increasing use of substances such as alcohol, khat and cigarette were mentioned as major problems of adolescents.

2. Primary sources of information and advice in matters of Sexual and reproductive health problems are usually peers. Adolescents are very reluctant in discussing their health problems with parents, as positive responses and approaches are not anticipated.

3. Use of existing health institutions, especially for reproductive health needs, is limited due to fear of being seen by parents or relatives. Unfriendly service providers and unaffordable service fees were also reasons for under utilization of services.

4. The use of a separate youth center was objected by some adolescents for fear of being wrongly labeled of using contraception methods or seeking services such as for STD and abortion. So, they emphasized improving the quality of services in the existing health institutions until the society's attitude favor the use of separate youth centers.

The questionnaire:

The data collection instrument was an anonymous structured close-ended questionnaire. It was prepared based on literature and opinion generated from the adolescents themselves during the FGD. It was prepared in English then translated

to Amharic then back to English to ensure understandability and message consistency to be finally administered in Amharic. Then the instrument was pre tested on a student population in a school not selected for the survey.

At the end of the pretest, discussion was hold with the respondents on the clarity of the questions, clarity of the skipping pattern, the sensitiveness of the questions, and at the same time the extent of their honest and frank response, the relevance of the study and other additional opinions they had. Besides identifying minor correctable mistakes, the students also commented on the importance of good explanation on the purpose of study, before embarking on the questionnaire administration in order to obtain honest and frank responses. Further more to enhance honest and frank response assuring the confidentiality of their responses, facilitating the privacy of each individual by separating male and female participants, keeping distance between individuals and securing silence in the room were found to be important. Thus taking into account the above points, the questionnaire was finalized by making the necessary changes. Separate questionnaires were used for male and female participants.

The principal investigator made the necessary official contact with concerned authorities of the City Education Bureau, Zonal Education Bureau, and Headmaster of the selected schools, and student guidance officers of each school, which resulted in good acceptance and cooperation in the whole process of organization. Further repeated visits were made to the selected schools to obtain student lists and identify the respondents and facilitate the data collection.

To facilitate the data collection, two supervisors and sixteen facilitators were recruited and trained before and after the pretest. They were divided into two teams during data collection to complete data collection in maximum three and half days to avoid contamination. The principal investigator and a trained youth counselor served as the overall coordinators of the survey. All administrative and logistics issues were the responsibility of the coordinators.

The facilitators were responsible for properly seating the respondents in each room, distributing the questionnaires, giving the necessary instruction and explanations on how to respond to the questions with the help of the flip charts prepared in advance and fixed on the front wall. While students were completing the questionnaire, they were maintaining absolute silence in the rooms, and moving around observing and assisting the respondents in filling the questionnaire. No respondent was allowed to leave until all has finished. Respondents were asked to put the completed questionnaire into a box by themselves to reassure the confidentiality of their responses.

Since there were no hall in many schools or even if there were, they were with out chair; several classrooms, laboratories, and libraries were used simultaneously for males and females separately for the survey. With the permission of school authorities, the survey was conducted during the 2nd and 3rd periods in order not to miss late coming and those ignoring classes at the end of the school shift.

7. Data Management and Analysis:

After the data collection, the responses were coded and entered on to a computer using Epi Info version 6.4 statistical programs. Then printout of frequencies was used to cheek for outliers and data cleaning was done by referring to the raw data whenever needed. Then the frequency distribution of dependent and independent variables were worked out. To establish associations between dependent and independent variable crude odds ratio with 95% confidence interval were calculated from a cross-tabulations using Epi Info. Adjusted odds ratios that control for potential confounding variables were calculated from a logistic regression model using SPSS version 10 statistical programs. Statistical significance was considered at p-value less than 0.05.

8. Measurement Variables

Dependent:

- Reproductive Health related problems i.e. sexual activity, teenage pregnancy, abortion, STD and contraceptive use;
- Substance use i.e. alcohol, cigarette, kaht and cannabis (hashish)
- Mental distress and attempted suicide
- Health service related:

i) Actual utilization – first advice sought and health service utilized for different categories of health problems; the accessibility, affordability and acceptability; and their attitudes towards the existing services.

ii) Preference of adolescents as a friendly ARHS by place, person, time, service fee and type of service.

Independent:

- Socio-demographic variables: sex, age, grade, ethnicity, religion, parent's education level, paid parent's work out of home, perceived family economical status, and pocket money.

9. Ethical Considerations:

Ethical approval was obtained from the Department of Community Health and then from AAU Ethical Committee before the study was launched. All concerned authorities were officially contacted and permission was secured at all levels. After the necessary explanation about the purpose study and procedures of the study verbal consent was obtained from all respondents. Confidentiality of the response was assured to the respondents by the anonymity of the self-administered questionnaire, that no school community members who know the respondents were allowed to observe questionnaire administration, and finally the respondents themselves dropped their anonymous responses in the collection boxes.

10. Operational Definitions:

Acceptable RHS: The acceptability of existing RHS to the satisfaction of adolescents as perceived by adolescents.

Accessible RHS: The health service where adolescents perceive they are easily accepted and served.

Adolescent: In this study though the overwhelming majority were in the age group 10-19, all in the age 10-24 were taken as adolescents.

Affordable RHS: The manageability of the service fee from the paying capacity of adolescents, as perceived by the adolescents themselves.

Alcohol user: adolescent who drink alcohol regardless of the frequency of use.

Any substance user: adolescent who takes any one of the four substances (alcohol, cigarette, Kaht or cannabis/hashish) regardless of amount and frequency.

Cannabis (Hashish) user: adolescent who consume cannabis regardless of amount and frequency.

Kaht chewer: adolescent who chew khat regardless of the amount and frequency of use.

Non-Reproductive Health Problem (Non-RHP): Adolescent who had physical illnesses that were not related to pregnancy, abortion, sexually transmitted and stress.

Mental distress: positive response to 6 or more items out of the 20 items of in the Self-Reporting Questionnaire (SRQ) by WHO.

Perceived Stress: Mental or emotional disturbance as felt by the adolescent.

Reproductive Health Problem (RHP): Adolescents who are sexually active and had encountered any of the following – pregnancy, abortion, or STDs.

Reported STD: ulceration in the genital area and/or bilateral or one sided swelling of the inguinal region and/or unusual genital discharge and/or burning during micturation.

Smoker: adolescent who smokes cigarette regardless of the amount and frequency of use.

Suicide attempt: reported non-fatal suicide act in the past.

V. RESULTS:

Social and Demographic Variables:

A total of 2656 school adolescents completed the questionnaire, of which 9 responses were excluded for gross incompleteness and inconsistency of responses. Analysis was made based on the 2647 completed questionnaires. Thus, the response rate was 87.4% of the 3028 calculated sample size.

Out of the total 2647 respondents, 1177(44.5%) were male and 1470 (55.5%) female with the male to female ratio of 0.8. The respondents were distributed by grade as follows 11^{th} –34.6%, 10^{th} –33.5% and 9^{th} -31.9%. The majority, 2191 (89.2%) were in the age group 15-19 years, 2584(98.6%) were never married and 1411 (55.4%) were from Amhara ethnic group. Two thousand one hundred fifty two (82.1%) were Orthodox Christians, 1774(67.4%) were living with both parents, 1913(74.1%) were from perceived medium economic status family and 2065(79.1) did not receive pocket money. (Table 1)

Considerable proportion, 1030 (39.6%). of students had mothers with out formal education, while 934 (36.2%) of fathers of the students had education level of 12^{th} plus two years and above. The majority of students, 1368(53.5%) had only one of the parents going out for paid work (Table 2).

Table 1: Social And Demographic Characteristics Of the Study Population, School Adolescents in Addis Ababa, May, 2000

Variable	Number (2647)	Percent
Sex		
Male	1177	44.5
Female	1470	55.5
Age		
10-14	188	7.7
15-19	2191	89.2
20-24	76	3.1
Missing = 192(7.3%)		
Marital status		
Not married	2584	98.6
Married	17	0.6
D/A/W	21	0.8
Missing = 25(0.91%)		
Grade		
9th	842	31.9
10th	883	33.5
11th	912	34.6
Missing =10(0.4%)		
Ethnicity		
Amhara	1411	55.4
Oromo	480	18.8
Tigray	274	10.8
Gurage	197	7.7
Others	185	7.3
Missing =100(3.8%)		
Religion		
Orthodox Christian	2152	82.1
Others Christian	274	10.4
Muslim	197	7.5
Missing =24(0.91%)		
Live with		
Both parents	1774	67.4
Single parent	517	19.7
Others	340	12.9
Missing =16(0.6%)		
Pocket money		
Yes	547	20.9
No	2065	79.1
Missing =35(1.3%)		
Perceived family economic status.		
Poor	360	13.9
Medium	1913	74.1
Rich	308	12.0
Missing =66(2.5%)		

NB. Sample size varies due to missing responses. Analysis done on valid N.

Table2: Parental Characteristics of The Respondents Addis Ababa, May 2000.

Variable	Numbers	Percents
Paternal education level		
Illiterate & non formal	690	26.7
Elementary school level	481	18.6
Secondary school level	479	18.5
12th plus 2 years and above	934	36.2
Missing =63(2.4%)		
Maternal education		
Illiterate & non formal	1030	39.6
Elementary school level	458	17.6
Secondary school level	473	18.2
12th plus 2 years and above	641	24.6
Missing = 45(1.7%)		
Parents work		
Both parents work	972	38.0
One of the parents	1368	53.5
Both do not work	217	8.5
Missing = 90(3.4%)		

NB: Sample size varies due to missing responses. Analysis done on valid N.

Reproductive health problem variables:

The assessment of reproductive health problems of the school adolescents revealed, 558 (21.9 %) of the respondents to be sexually active making a prevalence of 21.1 % from the total study population. Of these 386 (69.2%) were males and 172 (30.2%) females. The mean age of sexual debut was found to be 15.3 years (SD ±1.457), for male being 15.2 years (SD ± 2.7) and for female 15.8 (SD ± 3). One hundred five (18.8%) among the sexually active adolescents used condom during the last sexual intercourse and 151(27.1%) of the respondents claimed to have ever used any kind of contraceptive in the past. These constituted 4% and 5.7% of the total study population respectively.

Among the sexually active females 32, (18.6%) had pregnancy, out of which 22 (68.8%) ended up in abortion. Thus the prevalence of teenage pregnancy and abortion from the total study population was found to be 1.2% and 0.8% respectively. Ninety eight (17.6%) adolescents admitted to have ever had symptoms of STD in their lives while 44(7.9%) claimed to have the symptoms in the past three months. From the total population the prevalence of ever had STD and STD in the passed three months would be 3.7% and 1.7% respectively. Five hundred thirty five (23.4%) of the adolescents reported to have fear of acquiring HIV/AID (Table 3).

Although not shown in the tables, 1189(38.3%) of the students reported that their main source of information about sexual and developmental changes during adolescence were teachers and 1616 (52.5%) claimed mass media to be their source of information on STD and HIV/AIDS. Only 23 (15.5%) of those using contraceptive method obtained them from health institutions and 43 (45.5%) of adolescents who had STD did not seek for any kind of treatment in health institutions.

Table3: Magnitude of Major Reproductive Health problems Among School Adolescents in Addis Ababa, May 2000

Variables	Number	Percent from valid numbers	Percent from total N= 2647
Ever had Sexual intercourse			
Yes	558	21.9	21.1
No	1985	78.1	
Missing =104(3.9%)			
Condom use - last intercourse			
Yes	105	18.8	4.0
No	453	81.2	
Ever use of any contraceptive			
Yes	151	27.1	5.7
No	407	72.9	
Ever Pregnant of the sexually active female			
Yes	32	18.6%	1.2
No	140	81.4%	
Out come of the pregnancy:			
Abortion	22	68.7	0.80
Birth	8	25.0	0.30
Both abortion and birth	2	6.3	0.07
Ever had STD			
Yes	98	17.6	3.7
No	460	82.4	
STD in the passed 3 months			
Yes	44	7.9	1.7
No	514	92.1	
Fear of acquiring HIV			
Yes	535	23.4	20.2
No	1260	55.1	
Do not know	490	21.5	
Missing =362(13.7%)			

NB. Sample size varies due to missing responses. Analysis done on valid N.

Substance Use, Mental Distress and Attempted Suicide variables:

The assessment of magnitudes of substance use among the school adolescents revealed that 992 (41.2%) drink alcohol at least on holidays, 182 (8.2%) chew khat, 106(4.8) smoke cigarette, and 27(1.3%) use cannabis at least 2-3 times in a month. Thus the prevalence of alcohol, kaht, cigarette and cannabis use from the total population would be 37.5%, 6.9%, 4% and 1.02% respectively. Over all 1045 (39.5%) of the total population use at least any one of the substances mentioned.

One thousand two hundred twenty nine (51.9%) students were found to have mental distress and 284 (10.9%) gave history of attempted suicide in the past making a prevalence of 48.6% and 10.7% from the total population for mental distress and attempted suicide respectively. The most frequent means used for suicide was poisoning in 45.8% cases. (Table 4)

Risk to reproductive health problems among school adolescents (being sexually active) was found to be significantly associated after controlling for possible cofounders using logistic regression, with females sex protected than the male OR=0.34; 95% CI (0.26,0.45); older age group 20-24 about six times more OR=5.75; 95%CI (2.45,13.48); alcohol and khat users about two and four times more OR=2.23; 95%CI (1.72,2.90) and OR=4.43; 95%CI (2.76,7,11) at risk receptively. Those who reported to be from rich family were about two times at risk of having risk to RHP OR=1.76 95%CI (1.02,3.03) and those who were not living with any of the parents were by one and half times more exposed to risk to RHP OR=1.64; 95%CI (1.11,2.43). (Table 5)

Table 4; Magnitude of Substance Use, Mental Distress And Attempted Suicide Among High School Adolescents In Addis Ababa, May 2000.

Variables	Numbers	Percents from valid numbers	Percents from total respondents
Alcohol use			
Never use	1418	58.8	
Use	992	41.2	37.5
Missing = 237(9.0%)			
Chat			
Never use	2038	91.8	
Use	182	8.2	6.9
Missing =427(16.0%)			
Cigarette			
Never use	2103	95.2	
Use	106	4.8	4.0
Missing =438(16.5%)			
Cannabis			
Never use	2131	98.7	
Use	27	1.3	1.02
Missing =489(18.5%)			
Any substance use			
No	1602		60.5
Yes	1045		39.5
Suicide attempt			
Yes	284	10.9	10.7
No	2318	89.1	
Missing =45(1.7%)			
Mental Distress			
Yes	1229	51.9	46.4
No	1137	48.1	
Missing = 281(10.6%)			

NB. Sample size varies due to missing responses. Analysis done on valid N.

Table 5: Relationship between Selected Socio Demographic and Risks Behavior Variables with Risk to Reproductive Health Problems Variables of School Adolescents, Addis Ababa, May 2000.

Characteristics	Risk to RHP		OR (95% CI)** Crude	OR (95% CI)** Adjusted
	yes	No		
Sex				
Male	386 (34.0)	748 (66.0)	1.00*	1.00*
Female	172 (12.2)	1237 (87.8)	0.27 (0.22,0.33)	0.34 (0.26,0.45)
Age				
10-14	24 (13.8)	153 (86.4)	1.00*	1.00*
15-19	446 (21.1)	1668 (78.9)	1.70 (1.07, 2.72)	1.50 (0.84,2.68)
20-24	45 (61.6)	28 (38.4)	10.25 (5.17, 20.48)	5.75 (2.45,13.48)
Pocket money				
Yes	128 (23.9)	407 (76.1)	1.00*	1.00*
No	426 (21.6)	1550 (78.4)	0.87 (0.69,1.10)	0.96 (0.69, 1.32)
Family economic status				
Poor	88 (25.9)	252 (74.1)	1.00*	1.00*
Medium	389 (21.1)	1452 (78.9)	0.77 (0.58, 1.01)	1.25 (0.84,1.87
Rich	71 (23.6)	230 (76.4)	0.88 (0.61, 1.29)	1.76 (1.0,3.03)
Living with				
Both parents	334 (19.5)	1379 (80.5)	1.00*	1.00*
Single parent	125 (25.5)	366 (74.5)	1.41(1.12, 1.80)	1.31(0.94,1.83)
Others	96 (29.4)	230 (70.6)	1.72 (1.31, 2.27)	1.64(1.11, 2.42)
Parents work				
Both go to work	180 (19.2)	757 (80.8)	1.00*	1.00*
Only one parent	321 (23.7)	1007 (76.3)	1.30 (1.05, 1.61)	1.10 (0.80,1.48)
Both do not	46 (22.3)	160 (77.7)	1.20 (0.82, 1.77)	0.96 (0.56,1.63)
Alcohol drinking				
No	193(13.9)	1193 (86.1)	1.00*	1.00*
Yes	343(35.8)	615 (64.2)	3.45(2.80,4.25)	2.23 (1.72,2.90)
Kaht chewing				
No	380 (19.1)	1610 (80.9)	1.00*	1.00*
Yes	120 (67.4)	58 (32.6)	8.77 (6.18,12.44)	4.43 (2.76,7.11)
Smoking				
No	421 (20.5)	1632 (79.5)	1.00*	1.00*
Yes	65 (62.5)	39 (37.5)	6.46 (4.19,9.99)	1.52 (0.80,2.88)
Cannabis				
No	462 (22.2)	1917 (90.0)	1.00*	1.00*
Yes	18 (66.7)	9 (33.3)	7.02 (2.94,17.12)	2.79 (0.83,9.39)

NB. Sample size varies due to missing responses. Analysis done on valid N.

* Referent group

**95% CI – 95% Confidence Interval.

Adolescents Health Service Related Variables:

To assess the care seeking behavior and health service utilization by the adolescents, they were asked if they had had some 14 selected symptoms of different illness in the past 3 months. These health problems were grouped as non-reproductive health problems, reproductive health problems and stress. A clear pattern was observed in that while seeking parental or professional advice declines from non-reproductive health problems to reproductive health and stress problem adolescents are left unsupported (Figure 1).

A pattern of decreasing tendency of utilizing existing health services for reproductive health related and stress as compared to non-reproductive related problems was observed, while not utilizing any health service increases from Non RHP to RHP and stress (Figure 2).

Considerable proportion of adolescents reported that, reproductive health services are not are accessible 783(30.5%), affordable 523(20.2%) and acceptable 610(24.2%) in any of the existing health services for adolescents (Table 6).

Figure 1

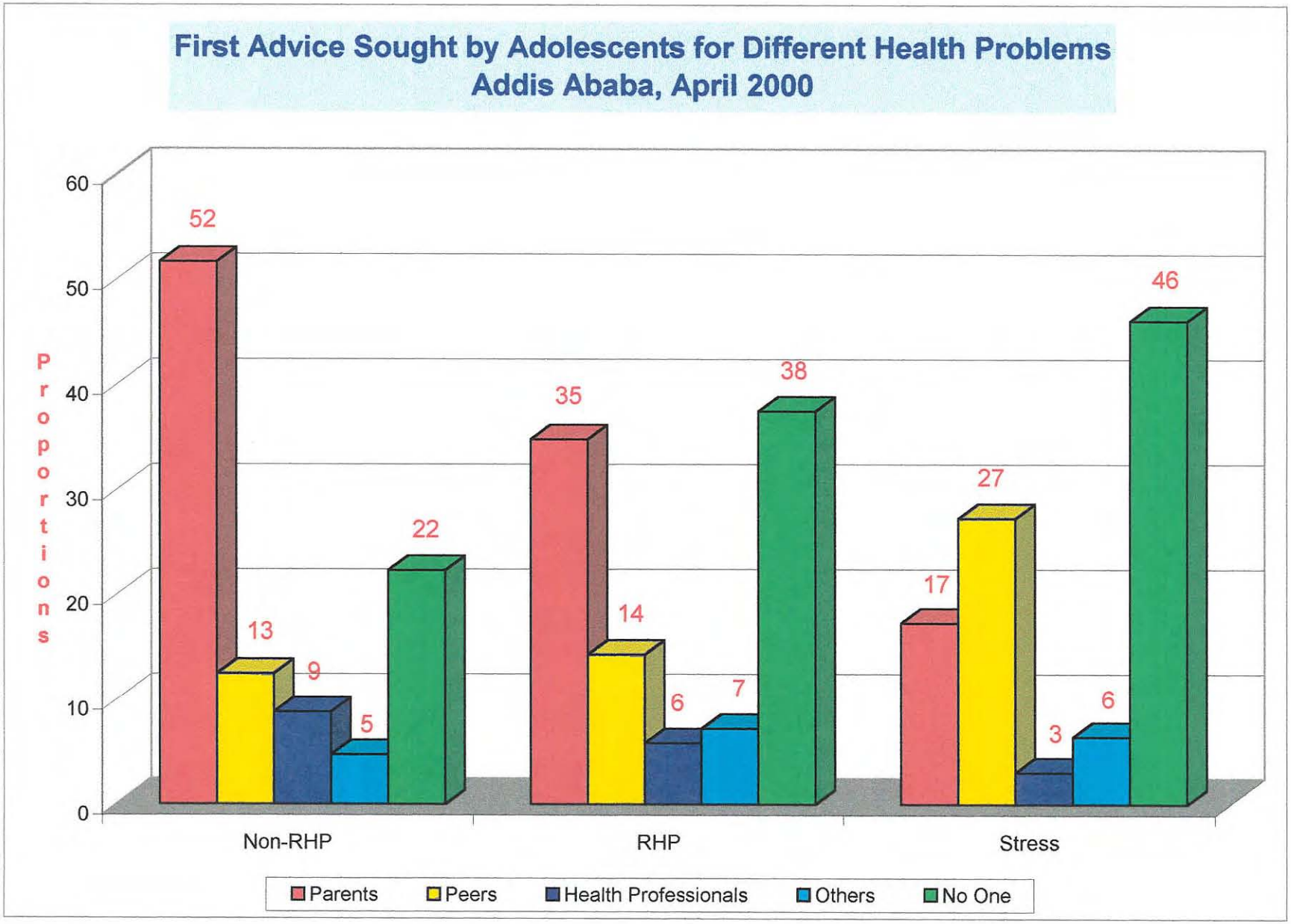

First Advice Sought by Adolescents for Different Health Problems
Addis Ababa, April 2000
Proportions
60
50
40
30
20
10
0
52
13
9
5
22
35
14
6
7
38
17
27
3
6
46
Non-RHP
RHP
Stress
Parents
Peers
Health Professionals
Others
No One

Figure 2

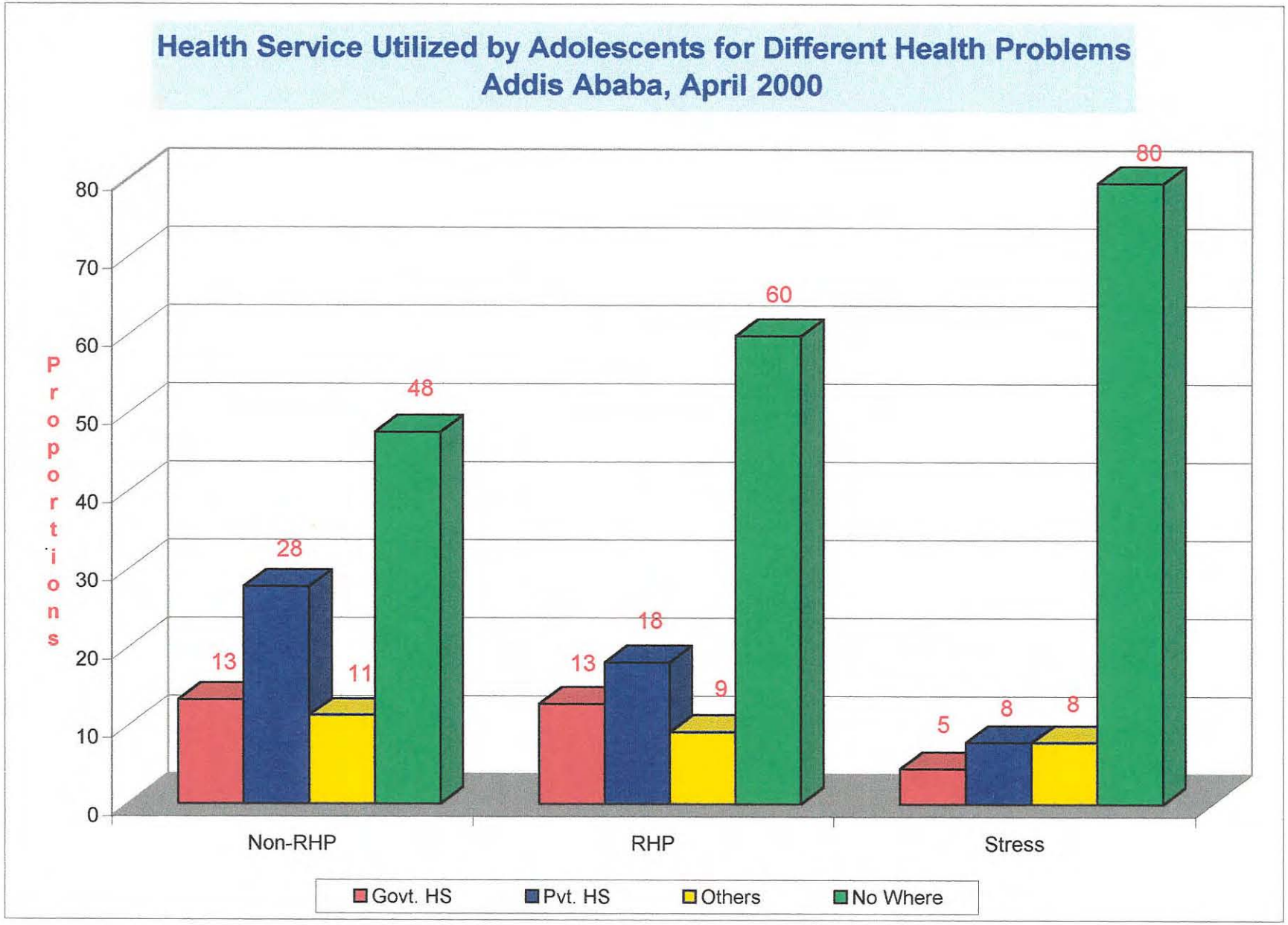

Health Service Utilized by Adolescents for Different Health Problems
Addis Ababa, April 2000
Proportions
0
10
20
30
40
50
60
70
80
13
28
11
48
13
18
9
60
5
8
8
80
Non-RHP
RHP
Stress
Govt. HS
Pvt. HS
Others
No Where

Table 6: Accessible, Affordable, and Acceptable RH Services as Perceived by Adolescents. Addis Ababa, May 2000

Variables	Numbers	Percent
Accessible health service:		
Government health institutions	843	32.8
Private health institutions	569	22.1
Village health services	106	4.1
Health service given in Pharmacies	31	1.2
School clinics	95	3.7
Others	145	5.6
No Health service is accessible for the youth	783	30.5
Missing =75 (2.8%)		
Affordable Health services		
Government Health institutions	1142	44.2
Private health institutions	186	7.2
Unofficial village health services	133	5.2
Pharmacies	36	1.4
School health services	116	4.5
others	73	2.8
No affordable health service	523	20.2
Do not know	375	14.5
Missing =63(2.4%)		
Acceptability of heath services:		
Good acceptability	726	28.9
Medium acceptability	1018	40.5
Unacceptable	610	24.2
Others	161	6.4
Missing = 132 (5.0%)		

NB. Sample size varies due to missing responses. Analysis done on valid N.

Considerable number of adolescents had the attitude that existing RHS are not meant for adolescents' secret use and they have fear of being seen by parents or others whom they know by 795 (31.0%) and 1852 (72.0%) respectively. Negative attitudes toward the service providers that, they are judgmental and unfriendly, and do not keep confidentiality was reported by 933 (36.3%) and 554 (21.7%) respectively. One thousand three hundred thirty three (52.0%)of the adolescents responded that the timing of health services is inconvenient for their use and 1402 (57.0%) claimed that service fees are expensive (Table 7).

As shown in table 8, there seems no consensus about the preferred place of service delivery, with in the existing health service with special approaches to adolescents or separate ARHS and the location of health service in relation to their residence by adolescents. However, 1776 (70.1%) preferred special service hours, 1127 (44.3%) young and the same sex health provider and 1351 (52.9%) expressed there preference for discounted fees for adolescents.

The assessment of adolescents' preference by health service type (Table 9) showed, the majority of adolescents would like to have services like information and education on general health 2442 (94.9%), on issues of family life and sexual education 2246 (87.6%), regular check up and curative services 2332 (91.5%). While considerable proportion also wanted to have voluntary HIV counseling and testing 2155 (84.1%) and family planning services 1771 (69.7%).

Table7: Attitude of Adolescents Towards The Existing Reproductive Health Services. Addis Ababa, May 2000

Variables	Numbers	Percents
Exiting RHS are meant for Adolescent secret use		
Yes	1011	39.5
No	795	31.0
Do not know	755	29.5
Missing = 86(3.2%)		
Fear of being seen by parents or others		
Yes	1852	72.0
No	334	13.0
Do not know	387	15.0
Missing =74(2.8%)		
Embarrassment at needing RHS by adolescents		
Yes	1738	67.8
No	364	14.2
Do not know	462	18.0
Missing = 83(3.1%)		
Providers are judgmental and unfriendly		
Yes	933	36.3
No	837	32.6
Do not know	800	31.1
Missing = 77(2.9%)		
Providers keep confidentiality		
Yes	1070	41.9
No	554	21.7
Do not know	928	36.4
Missing = 95(3.6%)		
The time of service is not convenient:		
Yes	1333	52.0
No	520	20.2
Do not know	715	27.8
Missing = 79(3.0%)		
Service fees are expensive		
Yes	1402	57.0
No	370	15.1
Do not know	687	27.9
Missing 188(7.1%)		

NB. Sample size varies due to missing responses. Analysis done on valid N.

Table8: Preference on ARHS Arrangements by Adolescents. Addis Ababa, May 2000

Variables	Numbers	Percents
Preference by Place:		
In the existing services with special approach to adolescents	552	21.6
In special rooms with in the existing HS		
In separate Adolescent health institutions	389	15.2
In school health services	569	22.3
In youth center	197	7.7
Others	501	19.6
Missing =95(3.6%)	344	13.5
Preference by Time:		
Usual working hours	524	20.7
Specially hours for adolescents	1776	70.1
Others	233	9.2
Missing = 114(4.3%)		
Preference of service provider:		
Young & of the same sex	1127	44.3
Young & any sex	332	13.1
Matured & the same sex	503	19.8
Matured & any sex	239	9.4
No difference	343	13.5
Missing =103(4.0%)		
Preference on service fees:		
At the usual rate	192	7.5
At special discount for adolescent	1351	52.9
Free of charge for adolescents.	691	27.1
Other	105	4.1
Do not know	213	8.4
Missing =95(3.6%)		
Preference on distance from residence		
Near residency area	966	38.2
Out side of residency area	945	37.4
Others	79	3.1
Do not know	538	21.3
Missing =119(4.5%)		

NB. Sample size varies due to missing responses. Analysis done on valid N

Table 9: Types of Health Services Preferred by adolescents.

Addis Ababa, May 2000

Variables	Numbers	Percents
General Health Information and service		
Yes	2442	94.9
No	77	3.0
Do not know	54	2.1
Missing =74(2.8%)		
Family life and Sexual Education		
Yes	2246	87.6
No	222	8.7
Do not know	96	3.7
Missing =83(3.1%)		
Regular check up and Curative Services		
Yes	2332	91.5
No	132	5.2
Do not know	84	3.3
Missing =99(3.7%)		
Voluntary counseling and testing for HIV		
Yes	2155	84.1
No	240	9.4
Do not know	168	6.5
Missing =84(3.2%)		
Family planning service		
Yes	1771	69.7
No	408	16.0
Do not know	364	14.3
Missing =104(3.9%)		

NB. Sample size varies due to missing responses. Analysis done on valid N.

VI. DISCUSSION

The study has revealed the magnitudes of the selected health related problems of school adolescents with emphasis on reproductive health. It has also shown a pattern of the health-seeking behavior of adolescents for non-reproductive health, reproductive health and stress related problems. More over it has also tried to elicit the attitude of adolescents towards different attributes of the existing reproductive health service. Finally it has surfaced the preferences of adolescents as youth friendly RHS by arrangement of place of services, health provider and other operational issues like time of service and service fee which is a relatively new description of adolescent and health service in our set up.

The socio-demographic characteristics of respondents had similarity with previous school based study in Addis Ababa (Eshetu 1994). In this study the respondent's perceived economic status of their family was asked, unlike previous studies, which asked for amount of monthly family income. The assumption undertaken for this was that monthly income would not reflect the family status. The reasons for this assumption are that with the declining buying capacity of the money and consideration of a number of household members, whether the money earned is really known and accounted and is consumed by the family.

The magnitude of adolescents' sexual activity reported in this study which is about 21% was similar to the school based study in Addis Ababa (Eshetu 1997) and considerably lower than earlier reports that ranged from 31-59% in Northern Ethiopia (Ismail 1995; Fantahun 1995; Fantahun 1997) in Southern Ethiopia (Taffa 1998); and

32- 41% in Addis Ababa (Tadesse 1996; Abate 1999). All the upper limits and the very high reports are from out of school community based studies (Tadesse 1996; Fantahun 1997; Taffa 1998; Abate 1999). This may suggest that the risk-taking behavior regarding sexual matter increase among the out of school adolescents who are not engaged in some kind of productive life. With the rising unemployment rate and underdeveloped vocational training centers, the reduced school years from 12 years to 10 years may further exacerbate early-unprotected sexuality among adolescents leading to different kinds of reproductive health problems, in particular to the escalating HIV situation. However, the magnitude of sexual activity even among the school adolescents is high as shown by previous school-based studies and by this study. This is also consistent with other studies in Sub Saharan countries and elsewhere (Blum 1991,WHO 1993,The Alan Guttmacher Institute 1999; Pathfinder 1999; Makwenidi 2000). At present the out of school adolescents in Ethiopia are not as captive as the school adolescents for any kind of intervention though they deserve high attention. Thus, interventions for school adolescents could be more feasible to reduce problems associated to sexuality and unsafe sex practices.

Given that considerable proportion of adolescents are sexually active and do not widely use contraception, pregnancy is likely to occur in some. Consistent with other reports, the majority of the pregnancies in our study ended up in induced abortions (WHO 1997, The Alan Guttmacher Institute 1999, Unuigbe 1998,). A good proportion of abortions are accompanied by serious complications and end up in hospitals as shown by previous hospital based studies which revealed 25% of abortion admissions and 30% of deaths due to abortion complications were

accounted by adolescents (Yosef 1993). Similar situation is also reported by different studies in Ethiopia (Tadesse 1996; Ismaiel 1997;Meskel 1999; Kebede 2000) and by other countries in other developing countries (Unuigbe 1988; Blum 1991; Senanyake 1994; Out look 1998; The Alan Guttmacher Institute 1999).

In this study condom use during the last sexual intercourse 105(18.6%) and ever use of contraceptive 151(27.1%) is lower than previous studies which are also generally low despite their high scores of knowledge. The most common source of condom was pointed out to be shops with only lower proportions of school adolescents getting from health institutions though relatively better FP service utilization by out of school adolescents was also reported by some studies (Fantahun 1995;Gebgessilasse 1996; Ismail 1997). Due to their dependency or financial constraints, adolescents could not always buy condoms or other contraceptives. Thus, with such low utilization of existing RH services their exposure to STD and HIV/AIDS could not be controlled. This could be the explanation to the higher reported magnitude of STD among the sexually active adolescents in our study as compared to previous studies, which were mostly out of school based (Abate 1999; Taffa 1998; Ismail 1977; Mengeste 1995).

Our findings concerning factors influencing reproductive health problems, which is risk associated with being sexual activity, are consistent with the previous studies. A significant association was observed with sex, older age groups, living with guardians than parents, and with abuse of alcohol and khat. These associations were also observed in previous study in Awassa (Mengeste 1995).

The pattern of substance use, that is alcohol being the most frequently used substance to be followed by khat and cigarette, was consistent with other studies in Ethiopia (Kassaye 1999, Mengeste,1995). Our result is also similar to the findings from Zimbabwe (Aheide, 1996). Khat chewing was found to be lower than the previous studies and hard drug like cannabis use was generally reported to be low in Ethiopia (Kassaye 1999; Gebresillasse 1995,Mengeste 1995,). The low prevalence rate in this study could be due to positive impact of clubs such as anti drug that are being organized as extra curricular activities in high schools in Addis Ababa, though an under reporting due to cultural taboo of reporting the use of this substances could not be ruled out.

In our study, the prevalence of mental distress among adolescents was found to be high. Though it is difficult to compared to that of the community based study in Addis Ababa, which was 6.8% for the age group15-24 in 1983 (Kebede 1999), the reason for our high results as compared to this study done about a decade ago, could be that stressful conditions are increasing may be due to the deteriorating conditions in schools, the escalating HIV/AIDS epidemic, deteriorating general economic conditions. The difference with the Jimma and Awassa study (Mengeste 1995, Gebremariam 2000) could be attributed to the nature of the two towns, that Addis Ababa as a metropolitan city and exposure effects of modernization and the associated consequences could to be more stressful. However, the prevalence of attempted suicide remained at the same level, (Kebede 1993) though still about 3 times higher as compared to the studies in Awassa and Butajira (Mengiste 1995,

Alem 1997). Poisoning was the most frequently used method to attempt suicide in all the previous studies including this study.

Adolescents, with a state of mind and level of psychosocial development dominated by imagination, desire for adventure and need to challenge all established standards and norms can easily fail into stressful situation. Thus stressful life events for adolescents may come from problems arising from mutual relationships usually manifested by rebellion against family norms, social customs and education system and so on (WHO 1971). This could be the reason why adolescents usually mention stress to be their major health problem in this study as in the other studies. (WHO 1971; Blum 1991; Tafari 1989). Hence, stress, which is thought to be a determinant to both physical and mental illnesses, could lead to mental distress and further to psychological maladjustment, pathological development of personality while adolescents are still in the process of formation (WHO 1971; Hofmman 1987). Therefore, evaluating and planning for the mental health service of this group of population in particular should be a major public health concern and focus of future studies.

The need for reproductive health services for the young has not been recognized until recently in developing countries (Focus 1999; Pathfinder 1999). A number of studies in recent years however, have shown reproductive health needs of adolescents, further recommending, that issues related to sexual and reproductive health should be addressed urgently (Mengeste 1995, Fantahun 1995 Ismail 1997). Unfortunately to date

there is no organized adolescent reproductive health service in our country and in many other developing countries.

It was difficult to get studies on health service utilization by adolescents to compare the results, in our country. However, some KAP studies have shown that services like family planing are underutilized by school adolescents, though this services are reported to be relatively better utilized by out of school adolescents (Fantahun 1995; Kora 1999).

In this study media and peers, were the main sources of information on RH issues like STD/HIV which is similar to all with previous reports from Ethiopia and elsewhere (Fantahun 1995 Taffa 1998; Abate 1999; Kambou 1996). In most developing countries including ours, most parents and adults in general feel uncomfortable to discuss sexual related issues with their children. This leaves the adolescents with so many unanswered questions in their minds. The fact that the overwhelming majority of students if not all did not mention teachers/schools as primary source of information, indicates the possibility that Family Life Education (FLE) which is said to be given in the formal education is not being properly delivered.

In trying to see if there was difference in the health seeking behavior between reproductive health problems and others, the study has shown the tendency of adolescents to primarily consult parents and use existing health institution for non-reproductive health problem; where as peer consultation or use of non governmental health institutions or not consulting any one and not utilizing any service were mainly observed for reproductive health and stress related problems. This may indicate that existing reproductive health services are not accessed by adolescents due to operational

barriers like inconvenient hours of operation and/or location of the facilities being at neighborhoods or far. Adolescents are mostly economically dependent, that unless special fee schedules are designed to make services free or affordable their access would be reduced (Blum 1991; Kurz 1995; Sendrowitz 1999, Kambou 1996). In addition to this health service providers are being reported to be judgmental and untrustworthy, as a result of which services are under utilized. Their own feeling of embarrassment in seeking RHS, may be due to cultural taboos or lack of information about their natural development, emerging sexuality needs and the right ways to deal with it which was also substantiated by the significant number of "Do not know" answers by the respondents in this study as well as other studies on adolescents (Eshetu 1997). Thus, these factors alone or together create feeling of discomfort that adolescents avoid or reduce the use of existing reproductive health services, which are generally for adults. These findings are in consistent to studies elsewhere (Marie Stops International 1995, Kurz 1995; Sendrowitz 1999).

Health service arrangement as it used to be planned by public health planners or decision-makers alone would not result in their utilization by adolescents. Therefore the involvement of the adolescents themselves in identifying their needs and expressing their attitudes are important in designing youth friendly services. Further, eliciting their preferences on the relevant attributes of services ensures participatory approaches and could result in effective future use of the designed ARHS as attempted by this study.

However, in many developing countries adolescent health services are addressed by few programs only, mostly run by NGOs (RHO, 2000). The Family Guidance Association of

Ethiopia is the major promoter of adolescent reproductive health program in different parts of the country to date. It was the major initiative where by participatory approch is also demonstrated to the extent of using peer promoters in Ethiopia (Weiss 1997).

The Strength of the Study

The fact that the study has shown some pattern of adolescents' health service utilization, revealed their unique characteristics, and has come up with the expression of youth friendly service from the adolescents themselves, in the absence of similar studies in the past, could be mentioned as the strength of the study.

The sampling technique employed, the survey instrument development with the participation of school and out of school adolescents to capture wider insight of urban adolescents on the relevant issues, the achievement high response rate, the use of appropriate methods to minimize bias, control for possible confounding factors and the consistency with studies in other countries makes this study valid and generalizable to urban adolescents.

Limitations of the Study:

Since the study touches very sensitive and intimate issues the possibility of underestimation cannot be ruled out.

The age representation was not comprehensive enough as it focused only high school and 12th grade adolescents were not included, as they had already completed school at the time of the survey.

Lack of similar studies on adolescents' health service utilization in Ethiopia specific to adolescents to compare results, are limitations of the study.

VII. CONCLUSIONS

1. The magnitude of the measured reproductive health problems, substance use, mental distress and suicide are quit high among adolescents.

2. The pattern of consultation and health service utilization by adolescents for reproductive health problems and stress are more of away from the existing formal health institution as compared to non-reproductive health problems.

3. Considerable numbers of adolescents perceive that existing reproductive health services are not youth friendly and significant of them claim that non-of the existing RHS are accessible affordable and acceptable for adolescents.

4. Though the majority of adolescents preferred to have separate ARHS, quite significant number of adolescents still want to use existing services for fear of stigmatization provided that there is friendly approach towards adolescents until separate ARHS are well understood by parents and the community at large.

5. The adolescents' preference on different types of services like health information in particular family life education and other reproductive health services including family planning and voluntary counseling and testing was found to be high.

VIII. RECOMMENDATIONS

1. Decision makers and Public health planners should give priority attention and address adolescent reproductive health service delivery, which could be started from the simple and what is available with in the existing health service by making them youth friendly.

2. Health service delivery must consider conveniences and preferences of adolescents to be further utilized effectively.

3. Preventive and promotive work should be strengthened through effective IEC and strengthening family life education in schools.

4. Strengthen school health services in general and incorporate ARHS starting from counseling services.

5. Sensitize the community as whole, parents in particular about the special nature of adolescents, the services needed for them and the need for uniformity of approaches in order to control confusing and contradicting actions and information to adolescents.

6. Further studies are recommended that take into consideration the out of school and rural adolescents.

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ADDIS ABABA CITY ADMINSTRTION

Key

Regional Boundary	_____	x
Zonal boundary	_____	---
Wereda Boundary	_____	—
Zone Code	_____	⊕
Wereda Code	_____	17

Non-scale

Questionnaire

General Instruction: On this questionnaire name will not be written. Therefore, who filled the questionnaire will not be known by any means. Though the questions touch personal life and secrets, we kindly request you to give the true and right answer. The purpose of this study is to know adolescent's health problems, and assess their preferences for organizing future adolescent health service. Thus once again assuring you that your responses will be kept confidential, we request your truthful and keen participation.

N.B. These are questions taken in the analysis for this study. **Code No. ____**

Socio-Demographic				
1.	Sex?	1. Male	2. Female	
2.	Age?	_____ year		
3.	Marital status?	1. Unmarried 2. Married 3. Divorced	4. Divorced/Separated 5. Widowed	
4.	Grade level?	_____ Grade		
5.	Ethnicity?	1. Amhara 2. Oromo	3. Tigre 4. Other specify _____	
6.	Religion?	1. Orthodox 2. Catholic 3. Protestant	4. Muslim 5. Other specify	
7.	Whom do you live with?	1. With Father & Mother 2. With mother only 3. With father only	4. With relatives 5. With Friends 6. Alone 7. Other specify	
8.	Father's education level?	1. Illiterate 2. Reading & writing 3. Elementary school graduate	4. Secondary school graduate 5. Attend Twelve plus 2 year program 6. 1st Degree and above	
9.	Mother's educational level?	1. Illiterate 2. Reading & writing 3. Elementary school graduate	4. Secondary school graduate 5. Twelve plus 2 year program 6. 1st Degree and above	
10.	Parent's job status?	1. Both parents work out side of home. 2. Only my father works	3. Only my mother works 4. Both do not work.	
11.	How do you perceive your family economic status?	1. Very poor 2. Poor 3. Moderate	4. Rich 5. Very rich	
12.	Do you have permanent pocket money?	1. Yes	2. No	

Risk Behaviors Related

13.	Do you drink alcoholic beverages like Tela, Tej, Areke, Beer and the likes?	1. Have never drunk 2. On holidays only 3. 2-3 time in a month	4. 1-2 times in a week 5. Daily	
14.	Do you smoke cigarettes?	1. Have never smoked 2. 2-3 times in a month	3. 2-3 times in a week 4. Daily	
15.	Do you chew Khat?	1. Have never chewed 2. 1-2 times in a month	3. 2-3 times in a week 4. Daily	
16.	Do you use cannabis (Hashish)?	1. Have never used 2. 1-2 times in a month	3. 2-3 times in a week 4. Daily	

Mental Health SRQ 20 & Attempted Suicide Related

17.	Do you often have headache?	1. Yes	2. No	
18.	Is your appetite poor?	1. Yes	2. No	
19.	Do you have sleeping problem in the evenings?	1. Yes	2. No	
20.	Are you frightened easily?	1. Yes	2. No	
21.	Do your hands shake?	1. Yes	2. No	
22.	Do you feel mental stress?	1. Yes	2. No	
23.	Do you have proper digestion problem?	1. Yes	2. No.	
24.	Do you have correct thinking problem?	1. Yes	2. No	
25.	Do you have unhappy feeling?	1. Yes	2. No	
26.	Do you cry beyond the limit?	1. Yes	2. No.	
27.	Do you have difficulty to enjoy on your daily activities?	1. Yes	2. No	
28.	Do you have difficulty in decision making?	1. Yes	2. No	
29.	Do you have difficulty in accomplishing you daily work?	1. Yes	2. No	
30.	Are you unable to play an important role in your personal life?	1. Yes	2. No.	
31.	Do you have lose of interest on many things?	1. Yes	2. No	
32.	Do you feel that you are worthless person?	1. Yes	2. No	
33.	Do you feel tiredness usually?	1. Yes	2. No	
34.	Do you have uncomfortable abdominal feeling?	1. Yes	2. No	
35.	Do you feel tiredness easily?	1. Yes	2. No.	
36.	Have you ever thought in your mind to attempt suicide?	1. Yes	2. No	
37.	Have you ever attempted suicide?	1. Yes	2. No	
38.	What was the method you used when you attempted suicide?	1. Self poisoning 2. Hanging 3. Stubbing	4. Gun shooting 5. Specify other	

Instructions: Again reminding you about the confidentiality of your answers, though the following questions are more personal and secret we request your true and genuine responses

Reproductive Health Related				
39.	Where did you get information about adolescent developmental and sexual changes?	1. I have no information 2. From parents/guardians 3. From teachers 4. From readings	5. From health professionals 6. From mass media 7. Others	
40	How old were you when you had your first menstruation or (sperm ejaculation)?	1. _____year	2. I do not have it yet.	
41	Have you ever had sexual intercourse?	1. Yes 2. No		
42	What was your age when you had your 1st sexual intercourse?	_____ year		
43	Have you ever used contraceptives?	1. Yes 2. No 3. Do not remember		
44	Have you or your friend used condom during your last sexual intercourse?	1. Yes 2. No 3. Do not remember		
45	Have you ever been pregnant?	1. Yes 2. No.		
46	How did the pregnancy end?	1. Induced abortion 2. Aborted by itself	3. Live birth 4. Both live birth or abortion	
47	Have you ever had STD that is genital ulcer, genital discharge, unilateral or bilateral inguinal swelling?	1. Yes 2. No 3. Do not remember		
48	During the last 3 months did you encounter the above mentioned symptoms?	1. Yes 2. No 3. Do not remember		
49	What did you do when you had STD?	1. I did nothing 2. Self treatment 3. Went to traditional healers 4. Went to pharmacy 5. Went to local healers	6. Went to private health service 7. Went to Governmental health service 8. Specify other	
50	Where is your major source of information about STD HIV/AIDS?	1. Parents 2. Teachers 3. Peers 4. Health Professionals	5. Mass media, radio/TV/ newspaper 6. Libraries 7. No specific source 8. Others	
51	Do you have fear of acquiring HIV/AIDS in the future?	2. 1. Yes 2. No 3. I don't know		

Instructions: For the following questions - if you had any of the symptoms of the health problems in the past 3 months please answer the rest from the choices given. If the answer is no skip to the next question.

Health Service Utilization and Preference				
	Health Problems	**Did You Encounter?** 1. yes 2. No	**Whom Did You Advise First?** 1. Parents 2. Friends 3. Health Professionals 4. Village/Home Health Service practitioners 5. Traditional Healers 6. Religious healers 7. Teachers 8. No one 9. Specify other	**Where Did you Get Health Service?** 1. Government Health Center 2. Private Clinic 3. Pharmacy 4. School Clinic 5. Village/Home Health Service 6. No where 7. Specify other
52	Fever and or shivering			
53	Headache			
54	Abdominal Pain, Diarrhea/ Vomiting			
55	Chest pain/Cough/sputum production			
56	Marked weight lose			
57	Burning sensation & frequent urination			
58	Unusual genital discharge, genital ulceration and unguinal swelling			
59	Pregnancy			
60	Vaginal bleeding other than menstruation			
61	Skin disease			
62	Dental illnesses			
63	ENT Problem			
64	Trauma			
65	Stress			

Please Answer from the Choices Given			
66	In which of this health institution do you think adolescents get reproductive health service easily?	1. Government Health Institutions 2. Private Health Institutions 3. Village/home health service 4. Pharmaceutical service	5. School clinics 6. Any other specify 7. There is no health institute that gives RHS for the youth easily.
67	Which health institute do you think is affordable for the youth?	1. Government Health Institutions 2. Private Health Institutions	5. School clinics 6. Any other specify 7. There is no health institute is affordable for

		3. Village/home health practitioner 4. Pharmaceutical service	the adolescents.
68	How do you think are existing reproductive health services acceptable by the adolescents?	1. With good satisfaction 2. With moderate satisfaction.	3. They are not acceptable by the youth. 4. Specify other

Regarding the existing Reproductive Health Services, on which of the following do you agree?

	Attitude of adolescents on the existing RHS	Yes	No	I don't know
69	Existing health institutions are suitable for secret use by the adolescents.			
70	Adolescents refrain from using RHS because of fear of being seen by parents or others who know them to hide their health problems.			
71	Adolescents get embarrassed at needing RHS.			
72	Health professionals are mostly demoralizing and are judgmental towards adolescents.			
73	Health professionals do keep the health-related problems of adolescents confidentially.			
74	The timing of health services is inconvenient for the adolescents in relation to school or work time.			
75	Health service fees are expensive for the adolescents.			

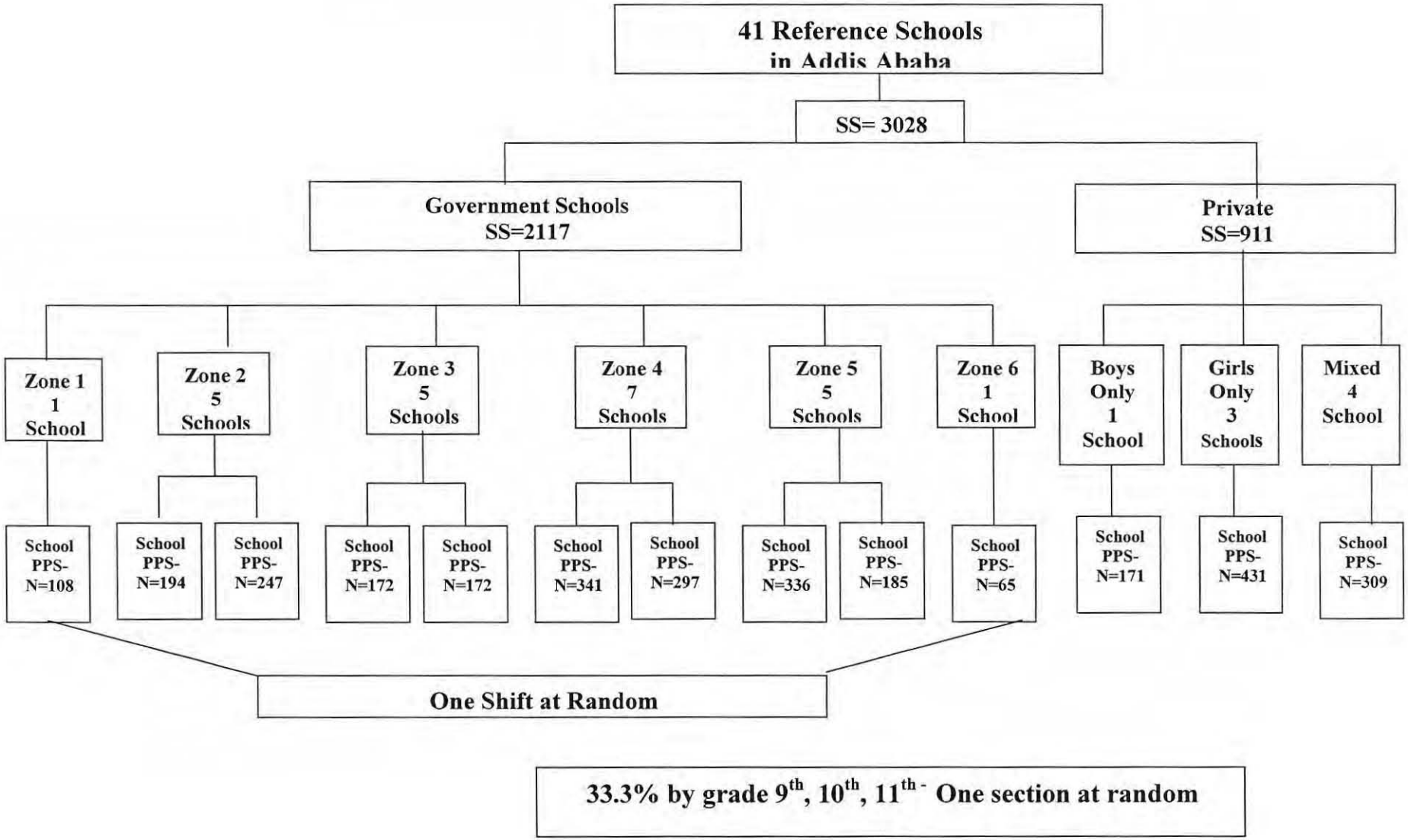
Preference of Adolescence on Arrangement of Reproductive Health Services

76	How should a youth friendly reproductive health service be arranged in the future?	1. With in the existing health institution as it is, but with special approach by the providers towards the adolescents. 2. With in the existing health institutions, but in special room that is arranged for the adolescents 3. In the health institution that is specially arrange for the adolescents only. 4. By organizing school clinics 5. By expanding health service in youth centers 6. Other specify		
77	Which time of service do you think is convenient for adolescents?	1. In the usual health institution's working hour 2. On the special hours when other users are not around. 3. Other specify		
78	Who do you prefer the health provider be?	1. Young provider of the same sex. 2. Young provider of any sex. 3. Age matured provider of the same sex	4. Age matured provider of any sex. 5. Any provider could be.	
79	What is your preference on service fees for adolescents?	1. At the usual rate. 2. With special discount for adolescents. 3. Free for adolescents.	4. Specify other 5. I don't know	
80	Where do you prefer the health service be located?	1. Near my residence 2. Far away from my residence	3. Specify other 4. Doesn't make difference	

Type of Reproductive Health Service Preferred

		Yes	No	I don't know
81	I would like to have general health information and education			
82	I would like to have developmental and sex & family life education			
83	I would like to have regular health check-up and health curative service.			
84	I would like to have voluntary HIV counseling and testing service			
85	I would like to have family planning service.			

Schematic Presentation of the Selection & Procedure of Schools and Respondents



Declaration

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

Name FREHIWOT BERHANE

Signature

Place ADDIS ABABA

Date of submission DECEMBER, 2000

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

Dr. Yemane Berhane _____ Advisor