BARRIERS TO USE CONTRACEPTIVE AMONG ADOLESCENTS IN THE CITY OF ADDIS ABABA

BY

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Declaration

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

Name of the student _____

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

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Dedication

This thesis work is dedicated to my beloved children **Tadael** and **Bilen** for being sources of motivation to decide to join the course and the strength to complete my study and Thesis work.

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Abbreviations

AA Addis Ababa

AAU Addis Ababa University

AIDS Acquired immunodeficiency Syndrome

ARH Adolescent Reproductive health

ASFR Age Specific Fertility Rate

CI Confidence interval

CP Contraceptive

CPR Contraceptive Prevalence Rate

DF Degrees of freedom

DHS: Demographic and Health Survey

EJHD Ethiopian Journal of Health developments

EMJ Ethiopian Medical Journal

ESOG Ethiopian Society of Obstetricians and Gynecologists

FP Family planning

FGD Focus group discussion

FGEA Family Guidance Association of Ethiopia

HIV Human Immunodeficiency Virus

ICPD International Conference on Population and Development

NGO Non Governmental Organization

OR: Odds ratio

SD Standard deviation

SEA South East Asia

SSA Sub Saharan African

STI Sexually Transmitted Diseases

UN United Nations

UNCEF United Nation children's Fund

UNFPA United Nation Population Fund

WHO World Health Organization

X^2 Chi-square

Abstract

A cross sectional comparative survey was conducted to assess barriers to the use of contraceptive among adolescents and their contraceptives choices and preferences, in a randomly selected samples of in and out of school adolescents in Addis Ababa city administration from November to December 2003.The data was collected using anonymous self administered questionnaire and focus group discussion. A total of 1591 (of which 796 out of school and 795 in school) adolescents participated in the quantitative and four sex segregated focus group participated in the qualitative part of the study. Of the 1591 respondents 733 (92.1%) out of school and 778 (97.6%) in school adolescents have heard about contraceptives. Ninety percent of respondents who heard about contraceptive (from the two adolescent populations) also knew where to get contraceptive. Sexual activity was 16.6% among in school and 36.4% among out of school adolescents. Of the sexually active adolescents more out of school 61.4% than in school 57.5% ever used contraceptive but, only 28.6% of out of school and 49.3% of in school ever users consistently used contraceptive. Majority 677 (88.1%) out of school and 650 (86.4%) in school adolescents were interested to know more about contraceptive. A significant proportion adolescents (81% of out of school and 88.1% of in school adolescents) plan to use contraceptive in the future of which 79.9% of out of school and 76.8 % in school adolescents prefers to use modern contraceptives but they showed varied preferences on the sources of contraceptive for future use. Great majority (245 out of the 248 ever users) faced various barriers to use contraceptive. It was concluded that adolescents face a wide range of - barriers to use contraceptives both at acquisition and use

levels. . Majority adolescents preferred to use modern contraceptive but they have varied preferences of sources of contraceptive for future use. And we recommend sensitizing communities to create supportive environments, and providers to build on youth friendly services at all delivery points.

Key words are:

Adolescents' contraceptive use and barriers to use contraceptive

I. Background and introduction

Adolescence is a cultural phenomenon and has no universal definition, however; it is conditionally defined as transition period of life between childhood and adulthood (1). WHO/UNFPA/UNICEF has also defined adolescence as the age between 10 and 20 (2). Adolescence is a time when many people experience critical and life defining challenge such as, the first sexual experience, marriage, pregnancy, and parenthood. Adolescents of today complete their physical, emotional, and psychological journey to adulthood in a changing world that contains opportunities and danger. Most adolescents are full of optimism, and represent a positive force in society, an asset now and for the future. If they get the support they need, they can be resilient in absorbing setback and overcoming problems. However, adolescents usually receive contradictory messages on how to address daily choices including sexuality, which have lifelong consequences for healthy development (3).

As in many parts of the world, in Africa traditional family and community support are no longer available or unable to cope with rapidly changing realities induced by urbanization. Organized community health services and social measures have not yet filled the gap. The course of transition from childhood to adulthood have been changed in the region, because more and more adolescents are attending school and delaying marriage, the traditional structures that educated and protected the previous generations of adolescents have been eroded as people moves to cities. Adolescents' exposure to non-traditional values through formal education, media, and communication network has further eroded the traditional

value. These changes have created barrier for the extended families and elders who often took the responsibilities of preparing adolescents for sexuality and parenthood due to geographical, language, and cultural differences. Thus when get matured and become sexually active with too little guidance, factual information and access to appropriate health services more adolescents face a series of health risks including unintended early pregnancies and STIs (4, 5,6).

The concerns about the adverse consequence of early child bearing (especially premarital) and the risk of contracting STI including HIV/AIDS have led to renewed interest in contraceptive (cp) and sexual behavior of adolescents. These concerns and the fact that adolescents constitute one fifth of the world population as well as their enormous potential impact on future population growth makes their knowledge about and use of cp a significant issue for both policy and research (7). Extending its concern and recognition the UN general assembly as part of the broader resolution reflecting on progress since the 1994 ICPD in Cairo for which Ethiopia was a signatory, urged government to recognize that sexually active adolescents require special family planning information counseling and services as well as prevention of and treatment for STIs (8).

Ethiopia is characterized by rapid population growth, as a result the majorities of its population is young. Adolescent (age 10 to 20) constitute one fourth of the total population of the country (9). Most people marry early and have children in their teens, thus contributing to the continuing population momentum. Being a country with complex cultural diversity, there are different cultural and social values and practices that determine or influence the age at which adolescent male and female begin sexual relation. Moreover

due to the unfortunate situation of war, drought and unstable social condition on top of the ever-existing low economic development the country is unable to offer a suitable transition from childhood to adulthood. Thus, young people in Ethiopia are bearing the brunt of the social economic and cultural changes taking place within the country. In this process they become victims of early pregnancy, STIs and death from unsafe abortion (10).

The material, social, general health, and reproductive health needs of Ethiopian adolescents have not been given attention until very recently. Government policies and programs so far have tried to address the needs of adolescents along with the general population. Presently there is a greater concern and recognition among Government that adolescent has special needs that require policy and programs effort. On this line the federal Ministry of Health began working to wards the development of a youth policy to address adolescent reproductive health (ARH) needs in 1996. It has organized an ARH steering committee and has identified HIV/AIDS infection, abortion and its health complication, early marriage and motherhood and high-risk pregnancies as critical ARH issues (11). In addition to government effort, many NGOs operating in Ethiopia have taken the initiative to organize ARH programs in the country. Among the programs the youth clinics organized by FGAE and Marie Stopes international Ethiopia runs reproductive health counseling and services including provision of cp (11, 12).

Addis Ababa, being the capital of the country, is at an advantage of having better potential health coverage and basic health indicators including CPR (13). However, previous studies among adolescents in the city indicated, high knowledge but low level cp use, and high rates

of unwanted pregnancy and unsafe abortion (14, 15, 16, 17). Moreover the four-year review of reasons for consultations at Family Guidance Association of Ethiopia (FGAE) youth clinics in Addis Ababa documented that 32.2% and 15.2% of youth visited the centers for unwanted pregnancy and STDs respectively while contraceptive methods that can prevent both were provided free of charges (16).

The above pieces of information shed light on the existence of barriers to the use of contraceptive methods among adolescents of Addis Ababa. Previous studies showed the discrepancy between knowledge and practice of cp and the consequences of the discrepancy but did not address why this discrepancy was created. This makes it important to assess why adolescents have knowledge about contraceptives but do not use them even though they are highly exposed to clandestine unsafe abortion procedures. Thus, the current study was conceived to identify the barriers that adolescents face to the use of contraceptives, reason for non-use and assess the future preferences of adolescents that might be important in designing programs for better future use.

II. Review of literature

2.1. Adolescent Sexuality

An important consequence of a rising age at marriage combined with a decline in the age at menarche is a substantial increase in the number of year between menarche and marriage. This trend resulted in increased number of sexually matures but unmarried adolescents. This

potentially leads to higher prevalence of sexual activity among unmarried, which expose them to unplanned pregnancies, abortion and contracting STIs (18).

There is a good deal of debate over what motivate adolescents to enter and maintain sexual relationship. Both Western and African observation pointed to the weakening of traditional control on adolescents sexual activity outside of marriage, conflicting values facing adolescents and their own perception and assessments of prone and cons of engaging in sexual activities has been incriminated as a causal factor (5,19). Some others considered adolescents being subjected to adult authority, many institution including religious bodies, family and educational systems, have vested interest in shaping the growth, the behaviors, and values of young people however they provide conflicting information. Often legal and social restriction prohibit adolescents right to acquire information about sexual activity and their access to reproductive health service and on their freedom to engage in certain sexual behaviors and deal with the reproductive consequences of their own action, unless they are married or have began childbearing. This increases tensions and stress among adolescent that makes them susceptible to peer pressure (20, 21).

As communities undergo rapid transformation there will be juxtaposition of traditional and modern values. To site an example in SSA, strong normative pressure to become a mother and high value for women fertility coexist with the option for young women to attain high level of education and have occupational opportunities in formal sectors. When adolescents are confronted with such conflicting situation they are often confused to define their right, responsibilities and of their sex role and gender expectation consequently adolescent face a greater conflict than adult do to decide postponement of sexual activity or use cp (19).

While sexual feeling can be expressed in many ways that are not in themselves harmful to health, if adolescents are supported by their communities and environment through family life education, sexual urge is often treated with anxiety or anger by adults and frequently with fear, guilt and shame by adolescent. These responses derive both sexual feeling and sexual behavior underground, making communication about healthy development of sexuality within affectionate and responsible relationship among adolescent more difficult (22).

Premarital sexual activity is universally taboo in Africa as else where in most developing world; however studies have revealed that the realities are far from expected. On the same line studies have documented that one in three adolescent aged 10-19 in Zimbabwe (23), 59% of adolescents aged 15-19 in Ghana of (which 51.4% out side of marriage) (24), 52.2% of Kenyan high school students (25) and 30.9% of adolescent girls in Nigeria (26) were sexually active.

Abstinence until marriage is the norm for most Ethiopian society; however evidence from different studies conducted among the urban adolescent in different parts of the country revealed sizable proportion of adolescents were sexually active out of the wed lock. In support of this, study conducted in the northern part of Ethiopia revealed 31.9% of student in Koladiba were sexually active (of which 72.2% were out of wed lock) (27) and 30.7% of students from three high schools in north Gondar were sexually experienced (of which 86.2%, were out of wed lock) (28). Mean age of sexual debut in these two study populations was 16.4 and 16.5 years respectively (27, 28). Survey conducted in the southern Ethiopia

indicated 49.3% of out of school youth in Awassa (mean age at sexual debut was 17) (29) and 17.5% never married high school students in Butajira were sexually active (30). Study in the eastern part of Ethiopia also showed that 50% of male and 20% of female from Harrar town (31) and 20% of female and 65% of male students in Harrar high school were sexually experienced (32). Studies conducted in the central parts of the country, revealed that 47% adolescents in Nazreth town were sexually active (33).

Evidence from different study conducted in Addis Ababa at a different times have documented that sizable proportion of young people were sexually active. In line with this a community based survey showed that, 35% of adolescents aged 15-19 were sexually active (34). School based study revealed that 16% of female and 33.5% of male students have ever had sexual intercourse (35). Another school based study has also revealed 21.9% of students have had sexual experience (15). Furthermore a comparative study conducted among in and out of school youth of aged 15-24 documented that one third of the adolescents (46.3%) of out of school and 18% of in school) were sexually experienced (36, 37). A more compressive study among never married urban adolescent women has also revealed that 18.8% them were sexually active (38).

2.2. Teen-age pregnancy

Globally, puberty is occurring earlier for both boys and girls. Young girls are increasingly Attend school and delaying marriage more than ever before in developing countries.

This combination of events has created a wide gap between the time that young girls can potentially engage in sexual activity and marriage. Thus adolescent girls are exposed to a greater risk of premarital intercourse and there, by to a greater risk of unintended pregnancies, abortion, and STIs (39).

Adolescent child bearing is a phenomenon that has a significant ramification at personal, social, country and global level. From the perspective of communities and government it has a strong negative effect on the level of educational achievement of young women, which in turn may have negative impact on their position in and potential contribution to the society (7). At individual level childbearing at an early age can shape and alter the entire future life of young women. Childbearing at an early age has a wide range of meaning and consequences. The consequences vary from fulfillment of an expected progression from childhood to adulthood conferred by marriage and motherhood and the joy and rewards of having a baby on one end. To the assumption of a burden of caring for and bringing up a child before the mother is emotional and physically prepared for the task and the responsibilities on the other end. In some countries if adolescent become a mother before marriage she is likely to face social ostracism and financial difficulty. In this case child bearing can also mean unhappiness if birth was unplanned or marital conflict resulted from marrying to have a baby in socially accepted union. Child bearing could also be source of lifelong disappointment because of failure to complete education and loss of earning opportunity (40).

At country and global level, young women who start childbearing during adolescence are likely to bear another child sooner than women who bear their first child when they are in their twenties. Thus this phenomenon in addition to its health, social and economic effect has implication for population growth (6, 22, 41, 42).

The social and the economic consequences of having a baby during adolescence depend on the cultural, familial, and community settings however, the physical and health consequences for both adolescent mother and her child are universally recognized as problematic irrespective of the marital status of the adolescent mother (22, 42). Moreover, the traditional values that strongly disapprove premarital sexual relationship and child bearing limit the necessary support and care that unmarried women needs during pregnancy thus unmarried adolescents carry a greater risk than their married counterparts (5, 7).

Despite taboos or cultural disapproval surrounding it, sexual activity among adolescents is common. This is evidenced by steep rise in HIV infection, and unwanted pregnancies and unsafe abortion. This makes information on the level of adolescent childbearing extremely useful in shading light on the level of sexual activity, poor use or non-use of cp. It also allows policy makers and program planner to estimate adolescents' need for cp information and service (3, 42).

Evidence from different studies indicated substantial variations of adolescent childbearing among regions and across countries. Adolescents of SEA have low to moderate ASFR ranging 32-61 births per 1000 adolescent women per year. ASFR for South Asia vary between 84 in Pakistan, 121 in India and 140 in Bangladesh per 1000 adolescent women per

year (5, 40). Countries of SSA exhibited the highest level adolescents childbearing in the developing world, ASFR among adolescents aged 15-19 for most countries of the region ranged 120 – 160 per 1000 adolescent women per year, the highest being 200 for Mali and Niger (5, 7, 40) and the lowest in South Africa with ASFR for Adolescent aged 15-19 being 103 births per 1000 women per year close to the Caribbean (48).

ASFR of adolescent aged 15-19 in Ethiopia was 110/1000 per year (43). Apart from the country wide DHS and fertility survey which usually include married women for questions regarding fertility and pregnancy, different cross sectional studies in Ethiopia revealed that sizable proportion of sexually active female adolescents were pregnant. In line with this 45% of sexually active female students in North Gondar (28), 50% of sexually active female student from Koladiba (27), 15% of sexually active female adolescent in Harrar (31), 17.2% of sexually active young women in Jimma (44) and 18% female students in Addis Ababa (15) were pregnant. Study in of Kenyan students has also revealed 8% of female students were pregnant (47).

Unintended pregnancy places young women to additional health risk, because it is most likely end up in abortion. The risk is greater in country like Ethiopia where induced abortion on request is legally prohibited (45). A country wide survey revealed that sizable proportion of birth to adolescent women were reported to be unintended, 54% of birth to under the age of 15 and 46% of birth among women aged 15-19 were reported as unintended. While 33% of birth to the under 15 and 11% of birth and to women aged 15-19 were unwanted (43).

Evidence from hospital based abortion survey in Addis Ababa also documented that out of 2275 cases of abortion admission 78% of pregnancies were unplanned while 69.2% were unwanted (46). The recent countrywide hospital based abortion survey has also showed that 49.1% and 35.3% of aborted pregnancies were unplanned and unwanted respectively. The same survey has also showed that the proportion of unplanned and unwanted pregnancies were higher among young and single women (17).

2.3. Abortion

Faced with unintended pregnancies, many young people turn to abortion, whether or not it is legal or safe. Young unmarried women who fear social rejection most likely, seek abortion from untrained providers, and attempt dangerous, late and unsafe self-induced abortion. Because of the fear, shame, and or lack of access or money, young women are also likely to delay seeking medical care if complications arise after abortion (49). Induced abortion is one of the drastic results of adolescents' lack of knowledge about and use of modern cp. The procedure is legally prohibited and clandestine in much of SSA. Given the legal position of abortion in the region of SSA combined with the rapid increase in teen age pregnancies, increased number of induced abortion from hospital based studies are likely to be carried out in unsafe environment (50).

The number of adolescent who undergo abortion or even the total number of abortion for all women is extremely useful in shading light on the sexual activities and contraceptive none or poor use. But this information is not available because the procedure is legally prohibited and its occurrence lack registration or abortion remained sensitive issue even in countries where it has been legalized and thus registration is incomplete (42). WHO estimated a total

of 20 million abortions per annum worldwide of which about 18 million occurs in developing countries but no estimation was possible for sub regions, country or by age of women. However the meager existing data mostly from hospitalized patients indicated abortion is a series health problem of adolescents in both Latin America and SSA (40).

Hospital based studies have also indicated the number of abortion cases has been increasing rapidly. Abortion has also been implicated as a leading cause of maternal mortality in all regions of Africa except in West Africa (50).In line with this Hospital based study in African countries revealed that 70-80% abortion admission in Nigeria (51), 60% of admission due to complication of illicit abortion in Lusaka and 24% of randomly selected Hospital admission due to abortion complications in Tanzania (53) were among young women aged 15-19(52).

In Ethiopia induced abortion upon request is illegal unless otherwise to save the life of the women from grave health consequence (45). However the existing Hospital based studies documented that, abortion is the leading cause of maternal death in Hospital. Studies have also revealed that significant proportion of admission due to abortion complication were adolescent. In line with this 45-57.5% of admission due to abortion complication and 66.6% abortions related death in Jimma hospital were among adolescents aged 15-19 (54, 55,56). Multi-cited hospital based study conducted in Addis Ababa showed 38.9% of cases of abortion admissions were among age group 16-20 (46). A recent more comprehensive nationwide Hospital based study on unsafe abortion conducted among 1075 cases of abortion complication admitted in 15 institution located in 9 out of 11 administrative regions of Ethiopia revealed that 16.2% of cases were among adolescent under the age of 20. The same study revealed Addis Ababa contributed more than its share (25% of total

cases and two of the four leading institution that reported the highest number of abortion cases) (17).

Unsafe abortion has long been recognized as preventable tragedy and is one of the neglected public health problems in developing countries however; the moral and the religious controversies surrounding the liberalization of induced abortion have continued to obscure the dimension and seriousness of the problems. Until this issue settled the most direct way to reduce the death and suffering of unsafe abortion is to prevent unintended pregnancies by increasing the practice of effective contraception (57).

2.4. Benefits of Contraceptive

Contraception is an essential and complicated part of modern life. Its use has separated sex from procreation, and has provided couples grater control and enjoyment of their reproductive life (58,59). For young couples cp use can help to postpone having their first child or subsequent children to complete their education. This freedom can make a significant difference in the economic future of the entire family. Further, if couple provide a role model to their children in terms of child spacing and takes their time to explain to them what FP meant to the couple and family, there is a greater possibility that their children will plan their own reproductive live and be spared from the problems associated with an unplanned pregnancies. Cp is a very important element in limiting population, thus preserving the planet's resources and maintaining quality of life for the present and future generations. Not only the direct effect of preventing pregnancy but also reducing the risk of acquiring STIs protect adolescents users from the life long complication of unprotected sex (5, 59,60).

2.4.1. Contraceptive Benefit of Contraceptives

Contraceptive protect adolescent women from dying through two major ways. To start with it prevents first birth at an early age that put young women or their children's health at a greater risk. Adolescent women who become pregnant face greater risk of pregnancy induced health problem and complication during childbirth than women who bear their first child at age 20 and above (6, 60, 61, 62). Secondly, if adolescent women use effective contraceptive method, they are less likely to become pregnant and resort to dangerous unsafe abortion risking their life where safe procedure on request is prohibited by law in countries like ours. In addition to the two major ways cp use can help to delay or avoid pregnancy for those adolescents who are most likely to have high-risk pregnancies. (6, 59, 60, 63, 64). Furthermore cp use benefit the health of children by preventing early pregnancy that most likely result inn low birth weight baby less likely to survive, and by making all children wanted and cared for (62).

2.4.2. Non contraceptive benefit of contraceptive

Not only delaying pregnancy, limiting the number of pregnancies and childbirth but also the non-contraceptive benefit of cp influence user's health. Though it is should not be the major determinant for selection of which cp to use, it can certainly help to decide between two or more suitable options. As the HIV/AIDS pandemic continue to be major threat to human life and young people remain the group facing the highest risk, condom provide non-contraceptive benefit that is critical for any sexually active person who may be at risk

of acquiring HIV or other STIs. Condom also protects adolescents from long-term complication of STIs including ectopic pregnancy, chronic pelvic pain, infertility (in both sexes), cervical dysplsia and cervical cancer (7, 62, 64, 65).

Hormonal contraceptive such as oral contraceptive provide protection against ovarian and endometrial cancer, fibroids of uterus, benign breast masses, pelvic inflammatory diseases and rheumatoid arthritis. They also help to decrease problems related to menstrual cycle such as pain and cramps (common during adolescence), dysfunctional uterine bleeding, functional ovarian cyst, premenstrual tension syndrome and anemia caused by heavy menus ration (62, 66, 67).

2.5. Adolescent Knowledge and Use of Contraceptive

Modern contraception is one of the essential elements of adolescent reproductive health. It allows adolescents to determine the timing and the number their children and empowers them to manage their lives with respect and dignity. ARH is increasingly being recognized as one of the major determinant of human development. Among the essential development concern contraception or prevention of unwanted early pregnancies considered to have a significant potential in improving the status of women (68).

Changing societal values being fueled by increasing urbanization, formal education, and rise age at marriage often present a great opportunity for adolescent. But it has also added risks associated with premarital sexual engagement like unwanted pregnancies and STIs. These risks are compounded by failure of government to prepare clear policy guideline and service

providers' attitudes to provide adolescents with the reproductive health information and service they need (69).

Even where adolescents have knowledge about cp and access to services many contextual factors affect the way adolescent make decisions to use cp. Among these factors the major one includes the extent of communication between partners, which is usually compromised among adolescents. Some think contraception is matters for married adult who want to space birth, others disapprove its use because they think it encourage promiscuity. While those who are either involved with older partner or in unwanted or forced intercourse are not in a position to discuss or negotiate contraceptive use. Attitude towards adolescents' social and sexual role, the culture surrounding adolescents sexual activity that condemn a girl who plan for sex and or attitude of planning for sex spoils roman's may not stop sexual activity but inhabit contraceptive use and expose adolescent women to unwanted pregnancies and STIs (4).

The social and psychological consequences of unplanned pregnancies are likely to be greater for unmarried adolescents than their married counterpart however; there are a number of reasons why unmarried adolescents are relatively unsuccessful in avoiding unwanted pregnancies. The major one includes, sexuality being a taboo subject in most societies, adolescents frequently have little knowledge about contraception or basic facts of conception. The other is because of their impulsive nature adolescents are less likely to plan, thus the act of intercourse may be as unexpected as the subsequent pregnancy which makes use of contraceptive less likely. Furthermore social sanction against premarital sexual activities and childbearing reflected by providers' negative attitude and hostile

reception or refusal to supply contraceptives for unmarried restrict adolescent from requesting use (20, 41).

Knowledge and use of cp among adolescents showed very wide variation among regions of SSA than other regions of the world. In conformation with this study among adolescent aged 15-19 in Ghana revealed that 85% knows at least one modern method of contraception while only 11% of sexually active adolescent used modern cp the rate for any methods was 27% (24). Similar study in Nigeria has revealed that over 60% of urban adolescent have heard of at least one method but only 4.7% of sexually active adolescents practice cp of which 3.5% of them practice modern methods (26). Another study indicated 90% of Kenyan high school students knew at least one method, 49% of male and 42% of female student ever used cp. The same study has also shown an increase in cp use from 25% versus 28% during the first to 31% versus 29% during the last intercourse among male and female students respectively, however only 11% of ever users considered themselves as frequent users (25). Knowledge of contraceptive methods among adolescents in most countries of Latin American, the Caribbean, Asia, Near east and North Africa, Exceed 90% (42).

Different studies conducted to asses the knowledge and use of cp among urban adolescent in Ethiopia documented relatively high level of knowledge of cp. In confirmation with this, report of studies conducted in Northern parts of the country revealed that 75% of students in North Gondar knew at least one method of cp but only 5.1% of sexually active respondent ever used modern cp methods (28), 83.7% of students in Koladiba were knowledgeable about at least one method of cp while only 34.1% of sexually active student ever used any

methods (27). Studies conducted in the Southern region of Ethiopia revealed 75% out of school youth in Awssa were knowledgeable about condom and its use but only 27.6% of sexually active youth have used condom during the most resent intercourse (29). A more comprehensive cross sectional study conducted in 55 urban parts of Ethiopia showed that 90% of sexually active male were aware of condom and 87% of sexually active female youth were aware of pill, however only 15% male and 39% of female respondent have ever used condom and pill respectively. The same study has documented that 12% of male and 10% of female has used periodic absence (70). Similar study have also documented 98.1% of unmarried adolescent women have heard at least about one cp method, 85% have positive attitude towards cp while 57.4% reported to ever practice cp, but only 30.7% of adolescent age 15-17 reported to ever practice cp (38). Community based survey in Nazreth also revealed that 95% of sexually active adolescents had information about at least one method of contraceptives and 78% of them ever used cp. The same study indicated the level of cp use was 38% during the first and 69% during the last intercourse (33).

Different cross sectional study conducted in Addis Ababa has also documented high level of contraceptive knowledge among adolescents of the city. In confirmation with this a community based study conducted among 1542 young people aged 15-24 indicated that 98% of the study population was knowledgeable about at least one method of contraceptives (34). A school based study has also documented a high (96.5%) level of knowledge of at least one method of cp, but only 27.5% of sexually active students had ever used any method (15). Another school based study among 1036 high school students

in Addis Ababa revealed that 93.5% of female 94.8% male students were knowledgeable about at least one method of cp (35).

Problem statement

Decision making to use contraceptive and other reproductive services involves a complex interaction of individual, social, and family and peer factors. These elements act in conjunction with socio-cultural factors such as living conditions and job opportunities that influence the sexual and reproductive decision that adolescent make. Studies on factors influencing decision have shown that individual knowledge and skill were the major factors regarding reproductive health matters (37).

Addis Ababa has better potential health coverage than most parts of the country which is 88.25% excluding the private institutions. The city holds 5 Government (excluding institutions owned by the federal Governments, university and armed forces) and 10 private and 2 NGO hospitals, 24 health centers, 6 Government and 28 NGO health stations and 47 health posts, over 340 private clinics of different capacity, 138 pharmacies 38 drug shops and 8 rural drug venders (13).

Different studies conducted among adolescents in the city of Addis Ababa revealed that vast majority of (93-98 %) adolescent has knowledge of at least one method of contraceptives (14,15,34,35). Despite the high knowledge and high potential coverage, less than one in three (27.5%) sexually active adolescents ever used contraceptive (15). Multisided hospital based abortion survey in Addis Ababa also showed that 38.9% of the admission for abortion complications were adolescents under the age of 20 and 78% and 69.2% of aborted pregnancies were unplanned and unwanted respectively (46).

Furthermore the four years (1990-1993) review; reasons for consultation at FGAE youth clinics in Addis Ababa documented 32.2% and 15.2% of consultations were due to unwanted pregnancy and STD respectively. Similarly among adolescents registered to seek health services through Saturday adolescent programs of these clinics, unwanted pregnancy and STD accounted for 20.1% and 30.4 % respectively (16).

In the absence of knowledge and access (at least physical access) problem the discrepancy between knowledge and use and high levels of abortion among adolescents should be attributed to barriers that adolescents face in trying to use contraceptive. Previous studies have assessed knowledge, attitudes, and practice and indicated the discrepancy between knowledge and practice and the consequences of the discrepancies. But why adolescents having knowledge do not use contraceptives though they are highly exposed to the risk of clandestine abortion procedures and what barriers adolescent users face are not been addressed**.** Thus, the current study was conceived to identify the barriers that adolescents face to use contraceptives, reason for non-use and assess the future preferences of adolescents that might be important in designing programs to address the barriers and for better future use.

III. Objectives of the study

3.1. General objective

To asses barriers to the use of contraceptive and choice of contraceptive methods among in and out of school adolescents in Addis Ababa

3.2. Specific objectives

1. To determine and compare knowledge of methods of contraceptives among in and out of school adolescent
2. To determine and compare the proportion of in and out of school adolescents using modern contraceptive methods

3. To asses and compare the contraceptive choice and preferences of in and out of school adolescents
0. To assess and compare views of in and out of school adolescents towards modern contraceptive methods
0. To asses and compare the preferred sources of contraceptive by in and out of school adolescents
0. To identify and compare the barriers to the use of contraceptive methods among in and out of school adolescents

IV. Methodology

4.1. STUDY DESIGN

The study employed a cross-sectional comparative study design with both quantitative and qualitative components.

4.2. Study area

The study was conducted in Addis Ababa city administrative council, which is the seat of the Federal state. It has a projected population of 2,646,000, with a sex ratio of 0.93 and growth rate of 2.9% per year. The adolescent aged 10-19 constitutes 29.1% of the population of the city. Addis Ababa is a densely populated city with population density of

4,991.2 per square kilometer. With regard to urban- rural distribution of the city, the urban part constitutes 56.1% of the total area and 98% of the population of the city (9).

The recently assigned municipality has redesigned the city into ten kifle-ketemas (sub-city) and 203 kebeles (the smallest administrative unit). Both the population of the city and the service-giving organizations like schools and health facilities are not evenly distributed among the kifle-ketemas.

The city holds 308 primary and 50 secondary schools. The secondary schools are broadly divided into 29 Governmental and 21 Non-Governmental. In the academic year 2002/2003 there were 97,208 secondary school students of which 87,478 went to government, and 8,882 to non-Government schools. The gross enrollment ratio of both sexes in secondary school is estimated to be 48.1 %(70). With regard to the ethnic composition of the population of the city, 48% were Amhara, 19.2% Oromo, 13.5% Gurage and 7.6% Tigrie. The religious composition of the population showed the overwhelming majority to be Orthodox Christian (81.8%), followed by Muslim (12.7%) (9).

Addis Ababa has better potential health coverage than most parts of the country which is 88.25% excluding the private institutions. The city holds 5 Government (excluding institutions owned by the federal Governments, university and armed forces) and 10 private and 2 NGO hospitals, 24 health centers, 6 Government and 28 NGO health stations and 47 health posts, and over 340 private clinics of different capacity (13).

Considering the health status indicators of the city: Crude birth rate is 22.7 per 1000, crude death rate 7.6 per 1000, infant mortality rate 61 per 1000 live births, child mortality rate 108 per 1000 live births, maternal mortality rate 566 per 100000 live births and life expectancy

at birth 64.1 for female and 60.3 for male. The major health problems are communicable diseases, which is not different from other parts of the country (70)

4.3. Study population

The source population was all senior high school students enrolled in 9^{th} -12^{th} grades in the year 2003/2004 and all out of school adolescents who were residents of the urban part of the city of Addis Ababa. The study population was all students under the age of 20 enrolled in the 8 selected schools in the year 2003/2004 and all out of school adolescents aged 13- 19 residing in the 10 selected kebeles of the 5 selected knife- ketemas of the city of Addis Ababa.

Though the government schools are not evenly distributed throughout the kifle-ketemas most kifle-ketemas have at least two high schools under the kifle-ketema education bureau and students are generally assigned to the school in their kifele-ketema apart from in rare cases where the number of students exceeds the capacity of the schools in the kifle-ketema. In this case they were assigned to the school in an adjacent kifle-ketema.

Inclusion and Exclusion Criteria

Inclusion criteria:

All senior secondary schools governed under the education policy of the country, primarily established for Ethiopian students and urban kebeles of the city of Addis Ababa.

Exclusion criteria:

The following general exclusion criteria were used to select study population:

1. Schools established for special groups of students such as orphans, or schools for the handicapped, which are specially organized for the respective groups.

0. Religious schools governed by strict religious rules, students of which might have different behavior that might affect the study variables
0. Boarding schools.
0. Foreign community schools.
0. Rural kebeles of Addis Ababa city administration where out of school adolescents might have different behavior that might affect the study variables.
0. Adolescents unable to fill the questionnaire without assistance, either because of disability (blindness) or illiteracy were also excluded from the study population.

4.4. Sampling Procedure

In order to select a fairly representative sample of adolescents of the city of Addis Ababa selection of schools and kebeles utilized a multistage probability sampling technique schematically described in Annex III. Below are the detailed descriptions of sampling procedures:

Stages of sampling

First stage:

Selection of Kifle-ketemas

0. All kifle-ketemas were identified by name
0. Five target kifle-ketemas were selected using simple random sampling.

Second stage:

Selection of schools and kebeles

i. Selection of the schools

0. All high schools were identified by name and type of ownership and location.
0. High schools were stratified by ownership into Government and Non-Government
0. The sample size for in school adolescents was proportionally allocated to governmental and Non-Governmental schools.

A. Selection of Government School

0. Schools from the five target kifle-ketemas were identified
0. One school from each target kifle-ketemas was selected at random
0. The effective sample for Government schools was then divided to each school proportionate to the number of pupils.
0. Since Government high schools operate with two shifts one shift was selected at random
0. The effective sample size for a high school was equally divided among grades
0. One class from each grade was selected using simple random sampling method.
0. All the members of the class who were eligible were invited to participate in the study except in cases were the number of the students in the class exceeded the number allocated for the class. In this case students whose roll number was randomly selected were invited to participate in the study.

B. The non-Governmental High schools

0. The non-Governmental high schools were stratified in to boys only, girls only and mixed, and then one high school was selected from each category.
0. The total sample size for non-Governmental high school adolescents was distributed to the selected high schools proportionate to the number of pupils.
0. The sample for a high school was equally divided among the grades
0. One Class was selected from each grade using simple random sampling
0. Since in all non-Government schools the number of students in the selected classes exceeded the number allocated to the class, students whose roll numbers were randomly selected were invited to participate in the study.

ii. Selection of kebeles

0. All kebeles of the five target kifle-ketemas were identified by numbers
0. Two urban kebeles were randomly selected from each target kifle-ketemas
0. The overall sample of out of school adolescents was equally distributed to the kebeles.
0. Two ketena (sub division of kebeles) were selected from the selected kebeles.
0. All households in the selected ketenas were visited and all out of school adolescents that fulfilled the eligibility criteria were asked to participate in the study.

iii. Selection of FGD participants

To select adolescents who had better information about the majority of their peers in their respective areas the following was done.

0. In-school participant selection: school unit leaders and student council selected two adolescents of each sex.

0. One out of school participant of each sex was selected from each target kebele by the kebele administration and youth association.

4.5. Sample size

Sample size was calculated using EPI Info statistical program for two-population proportion using the following general formula**,**

$$n_1 = \frac{\left[Z_{\alpha/2}\sqrt{(1+1/r)\bar{P}(1-\bar{P})} - Z_{\beta}\sqrt{P_1(1-P_1)+P_2(1-P_2)/r}\right]^2}{(P_1-P_2)^2}$$

Where

$n_{1=}$ sample size of in school $n_{2=}$ sample size of out of school

$r = n_{2/}n_{1} = 1$ $Z_{\alpha/2} = 1.96$ $Z_{\beta} = 0.84$

p_{1} =population proportion for in school, $p_{2=}$population proportion for out of school

$$P_{=} \quad \frac{p_{1+}rp_{2}}{1+r}$$

To determine the sample size the following assumptions were made:

Embarrassment to ask for contraceptives would be the most important barrier that was reported to be 72 % for in school adolescents (15) and 62% was taken for out of school adolescents arbitrarily for lack of study. A 10% difference was to be detected between in and out of school adolescents. With a 95% confidence level, power of 80%, design effect of 2, non-response rate of 10% and 1:1 population allocation ratio. Calculated sample size: n_1 =805

Therefore there was a total study population of 1610 for the two adolescent populations.

4.6. Data collection

A structured anonymous closed and open-ended questionnaire was developed by revising questionnaires developed for similar study and adapting it to the objectives of the present study to collect quantitative data. The questionnaire was designed in English and was translated to Amharic. Then different persons with a good background in both languages translated the Amharic version back to English. Experts validated the different version so that the original meaning was retained. Finally the instrument was administered in Amharic. The questionnaire was pre-tested in a similar setting among kebeles and schools not selected for the survey to ensure understandability. At the end of the pre-test issues of clarity of the questions, of the skipping pattern, sensitivity of the question and the relevance of the study were discussed with the participants. In addition to a few comments on the correctable mistakes on the questionnaire, some more substantial corrections were made. For example on the question that asked respondents' approval of adolescents' use of cp there were originally two choices (Yes or No) but participants said one could approve or disapprove conditionally, so a third choice (Other) was included. Furthermore, participants in the pre-test commented on the importance of the explanation of the objectives of the study keeping confidentiality and privacy to obtain honest responses. Thus finalization of questionnaire considered all the points that arose during the pre-test and necessary changes were made to make the questions appropriate and understandable.

In a setting like ours where sexuality is a taboo subject and premarital adolescent sexual activity faces strong social disapproval, getting deep insight and soliciting information about the extent of adolescent sexuality and cp use, the barriers adolescents face to use cp and the preferred methods and sources of cp for future use using quantitative method can be

difficult. Taking this important point into consideration, a focus group guide was prepared and pre-tested for its appropriateness to elicit the necessary information. A final guide was prepared after incorporating comments from participants.

The principal investigator made the necessary contact with the concerned authorities of the Addis Ababa city administration education bureau, and the directors of the selected schools. The concerned authorities of the kifle-ketema bureau and the head of the kebele bureau were also contacted, which resulted in acceptance and cooperation in the process of organization of data collection. Frequent visits were made to the selected schools to obtain the list of classes, the number of students per class and the role numbers of the students in each class so as to identify respondents. Similar visits were made to the selected kebeles to get the number of ketenas and the rough estimation of number of out of school adolescents in one ketena to facilitate data collection. The visits to the school and kebeles were successful in getting all the necessary information.

To further facilitate data collection, one supervisor and ten facilitators were recruited and trained intensively for three days both before and after the pre-test of the instrument. To avoid contamination of information, data from the school and the adjacent kebeles were collected on the same days. The principal investigator served as supervisor and overall coordinator of the survey and handled all administrative and logistics issues.

Facilitators' responsibilities were to properly seat the in-school respondents in the room, distribute the questionnaire, read the objectives of the study from the provided guide, give the necessary instruction and explanations on how to respond to the questionnaire with the help of flip charts fixed on the wall where they were most visible to all respondents in the room. While school adolescents were filling the questionnaire, facilitators maintained

silence, assisting respondents in case they had questions. As it was explained to the respondents once they had given their consent to participate returning the filled questionnaire and leaving the room until all had finished were not allowed. Facilitators were also responsible for collecting the filled questionnaires; by politely asking the respondents to put the filled questionnaire into the prepared box by the door side by themselves on their way out to confirm confidentiality of their responses. Since halls that could accommodate all the respondents of a school were either not available, not readily arranged for the purposes or were occupied for other tasks, free classes, laboratories and libraries were used for simultaneous filling of the questionnaire by all respondents of a school so as to avoid contamination of information. With the arrangement made with the school authorities the survey was conducted in the second and third period to include latecomers and early leavers, and to avoid careless responses from tired students.

The facilitators tasks during data collection from the out of school adolescents included providing questionnaires along with envelopes after reading the objectives of the study and securing respondents' consent to participate in the study. They were also responsible for explaining how to respond to the questions, securing the privacy of respondents by not interfering unless asked, staying with respondents during the time they filled the questionnaire and requesting other family members or guests kindly not to disturb the respondents and taking the filled questionnaire in a sealed anonymous envelope to reassure confidentiality of responses.

4.7. Data management and Analysis

4.7.1. Analysis of quantitative data

After collection of data the responses were coded and were entered into a computer using EPI Info version 6.4 statistical programs, after data entry finished, 10% of the responses were randomly selected and checked for consistency of data entry. Then printed frequencies were used to check for outliers and clean data. Data was cleaned accordingly and then exported to SPSS version 10.0 for further analysis. Then the frequency distribution of dependent and independent variables was worked out. The two sample t-test was used to compare means. To establish associations between dependent and independent variables, P values were used. Chi-square test was used to select associated independent variables for multiple logistic regressions. Adjusted ORs that controls the confounding effects of other covariates were calculated using the multiple logistic regression models of SPSS version 10.0 statistical programs. Statistical significance was considered at P-value less than 0.05.

4.7.2. Analysis of qualitative data

In a society like our where sexuality is a taboo subject and pre-marital adolescent sexual activity face strong disapproval, it is difficult to elicit a real picture of sensitive issues like contraceptive use using purely quantitave data. Taking this into consideration a small scale qualitative study was conducted to collect qualitative data using FGD. Accordingly four FGDs were conducted (two sex segregated group from the two target population of the qualitative study) to augment the quantitative part of the study.

In order to systematically approach the discussants the discussion guide was divided into three parts:

Part I: Where do adolescents spend their leisure time and how and why are they engaged in

sexual activity

Part II: How do they perceive the level of knowledge and use of cp among adolescents?

Part III: Do adolescents faced problems in trying to use cp? if so how should services be arranged in order to address the problems faced by adolescents to use cp

After the note taken during the discussions were developde by litsening to the tape recorded during the discussions. The notes from the four groups were trancribed to English .Then the group reflections were summerized while demostrative cots were selected and presented as it was forwareded.

4.8. Measurement variable

Independent variable

Socio-demographic factors (sex, age, marital status, schooling status, religion, living arrangement, perceived economic status of the family, parents job status, pocket money); Adolescents knowledge and views towards cp;

Communication with parents and peers about sexuality, and contraceptive

Dependent variable

Contraceptive use

4.9. Ethical considerations

Ethical clearance was secured from the ethical committee of AAU medical faculty research and publication committee before the study was launched. All concerned bodies were officially contacted through letters and permission was obtained at all level. After the purposes and the procedure of the study were explained verbal consent was obtained from

all respondents. Confidentiality of the responses were assured to the respondents by anonymity of the self-administered questionnaire, by keeping the privacy of the respondent while filling the questionnaire, by arranging a collection box to drop the responses by the respondent themselves for in school and providing anonymous envelopes to be returned sealed by the respondents in the case of out of school respondents.

4.10. Operational definition

- Adolescent: The concept of adolescence is difficult to define across different socio cultural setting and profession; for the purposes of this study adolescence is defined as age group 13-19 years.
- In school adolescents: are those adolescents aged 13-19 attending day time regular high school education during the time of the survey.
- Out of school adolescents: are those aged 13-19 not attending school during the day time, excluding, commercial sex workers and those employed informal sectors..
- Residents of kebele: are those who lived in the selected kebeles for more than six month
- Ever use contraceptive: use of any method of contraceptive at least once during the sexual life.
- Consistent use of contraceptive: use of contraceptive during every sexual intercourse starting from the first sexual intercourse.

NB:

- The minimum age for the study population was selected bases on the information from the region education bureau for minimum age at the entry of high school
- Residence was defined on bases of information from kebeles for considering individual as resident.

V. Results:

5.1. Results of quantitave data

Socio-demographic characteristics of study population

Of the calculated 1610 sample of adolescents, 1599 completed the self administered questionnaire while 5 in school and 6 out school adolescents refused to participate in the study .Of the filled questionnaire 5 from in school and 6 from out of school were excluded for gross incompleteness and inconsistency. Analyses were based on the 1591 questionnaires making the overall response rate of 98.8%. Out of the total 1591 respondents 796 (50%) were out of school adolescents and 795(50%) were in school adolescents (Table 1.1). The sex ratio of participants was 0.78 and 0.95 for out of school and in school adolescents respectively. Majority of respondents (98.2% versus 93.6% out and in schools respectively) were in the age group 15 to 19 and the mean age of respondents was 17.96 year for out of school and 16.53 year for in school adolescents. Higher proportion of out of school respondents (37.3%) has completed high school while (7.9%) can only read and write. The grade distribution of students were 220 (27.7%) 9^{th}, 223 (28.1%) 10^{th} , 191 (24.0%) 11^{th} and 161 (20.3%) 12^{th}. Majority of respondents, were never married, and followers of Orthodox Christian.

A higher proportion of respondents (48.5% out of school and 63.7% in school) adolescents live with both of their parents (Table 1.2), While 227 (28.7%) out of school and 119 (15%) in school live with people other than their parents. Sizable proportion of respondents 326 (41.0%) of out of school and 261 (32.8%) of in school had mother with out formal education.

Table1.1. The social and demographic characteristics of the study population, Adolescents In Addis Ababa, November 2003

Variable		Out of school Number (percent)	In school Number (percent)	Total Number (percent)
Sex	Male	448 (56.3)	408 (51.3)	856 (53.8)
	Female	348 (43.7)	387 (48.7)	735 (46.2)
Age group	13-14	14 (1.8)	51 (6.4)	65 (4.1)
	15-19	782 (98.2)	744 (93.6)	1526 (95.9)
Marital status				
Never married		771 (96.9)	792 (99.6)	1563 (98.2)
Married		23 (2.9)	3 (0.4)	26 (1.6)
Divorced		2 (0.3)	0	2 (0.1)
Educational status				
Reads &write		63 (7.9)		64 (7.9)
Elementary not completed		168 (21.1)		169 (21.1)
Elementary completed		70 (8.8)		71 (8.8)
High school not completed		159 (20.0)		160 (20.0)
High school completed		297 (37.3)		298 (37.3)
High school +other training		39 (4.9)		39 (4.9)
Grade level	9^{th}		220 (27.7)	221 (27.7)
	10^{th}		223 (28.1)	224 (28.1)
	11^{th}		191 (24.0)	192 (24.0)
	12^{th}		161(20.3)	161 (20.3)
Religion				
Orthodox Christian		650 (81.9)	664 (84.5)	1314 (83.2)
Other Christian		74 (9.3)	84 (10.7)	158 (9.5)
Muslim		70 (8.8)	38 (4.8)	108 (6.8)
Live with				
Both parent		384 (48.5)	505 (63.7)	889 (56.1)
Single parent		181 (22.9)	168 (21.3)	350 (22.1)
Other		227 (28.7)	119 (15.0)	346 (21.8)
Pocket money	Yes	171 (21.5)	223 (28.1)	334 (25.0)
	No	616 (77.4)	572 (71.9)	1188 (75.0)
Working for pay	Yes	234 (31.2)	74 (9.5)	308 (20.1)
	No	517 (68.8)	704 (90.5)	1221 (79.9)
Perceived economic status				
	Poor	268 (34.2)	164 (20.8)	432 (27.5)
	Medium	492 (62.8)	563 (71.3)	1055 (67.1)
	Rich	23 (2.9)	63 (8.0)	86 (5.5)

NB: Sample size vary due to the missing responses analysis was done on valid N

Table1. 2. Parental characteristics of adolescents in the city of Addis Ababa, November 2003

Variable	Out of school Numbers (percents)	In school Number (percent)	Total Number (percents)
Paternal education			
Illiterate & informal	181(22.9)	127 (16.0)	309 (19.4)
Elementary	107 (13.4)	102 (12.8)	209 (13.1)
Secondary	57(7.2)	85 (10.7)	142 (8.9)
Above secondary	67(8.4)	212 (26.7)	279 (17.5)
Don't know/	3 (0.4)	24 (3.0)	27 (1.7)
Not applicable	380 (47.7)	245 (30.8)	625 (39.3)
Maternal education			
Illiterate & informal	326 (41.0)	261 (32.8)	587 (36.8)
Elementary	94 (11.8)	102 (12.8)	196 (12.3)
Secondary	51 (6.4)	87 (10.9)	138 (8.7)
Above secondary	37 (4.6)	161 (20.3)	198 (12.4)
Don't know	33 (4.1)	22 (2.8)	55 (3.5)
Not applicable	255 (32.0)	162 (20.4)	417 (26.2)
Parent work			
Both parent work	58 (25.4)	259 (35.5)	445 (30.5)
One parent work	382 (52.3)	405 (55.6)	787 (53.9)
Both parent don't work	163 (22.5)	65 (8.9)	228 (15.6)

NB: Sample size vary due to the missing responses analysis was done on valid N
- Not applicable was used for those adolescents who were not living with there parents

Contraceptive knowledge of respondents

More in school than out of school adolescents (97.9% versus 92.1% respectively) have heard about cp methods (Table 2.1).Of those who heard of cp a higher proportion of in school adolescents than out of school (90.8% versus 81.1%) spontaneously named at least one cp, while 99.9% of out of school and 99.5% of in school correctly identified at least one cp from the list of item. The three most frequently spontaneously named methods were pills, condom and injectable (Table2.2). Written material/books, teachers, and Medias were the three most frequently reported source of information about cp in their respective orders (figure 1.1). Whereas health professionals, friends and written material/books were the first three most preferred sources of information about cp in their respective orders (figure1.2)

Of those adolescents who have heard about cp, more in school adolescents 656 (89.0%) than out of school 661 (87.1%) also knew where to get cp if they wanted. Out of adolescents who knew where to get cp, more in school 482 (73.0%) than out of school 402 (61.7%) spontaneously named at least one sources of contraceptive. While more out of school 652 (99.8%) than in school 655 (99.4%) identified at least one source of cp from the list of item. Government hospital/health center, pharmacies and private hospitals/clinics were the three frequently spontaneously named sources of cp in their respective orders (Table 2.3). Since correctly identifying sources from the list or answering yes when asked if they heard of cp or knew source of cp are less reliable knowledge, spontaneously naming at least one cp or one source of cp will be considered as knowledge for subsequent analyses.

Table 2.1. Contraceptive knowledge of respondents, adolescents in the city of Addis Ababa, November 2003

Variables	Out of school Number (percent)	In school Number (percents)	P value
Heard of cp			
Yes	733 (92.1)	778 (97.9)	0.0001
No	63 (7.9)	17 (2.1)	
Spontaneously named one method			
Yes	595 (81.1)	704 (90.8)	0.0001*
No	138 (18.9)	71 (9.2)	
Identified one method from the list			
Yes	731 (99.9)	768 (99.5)	
No	1 (0.1)	4 (0.5)	0.375

NB: Sample size vary due to the missing responses analysis was done on valid N

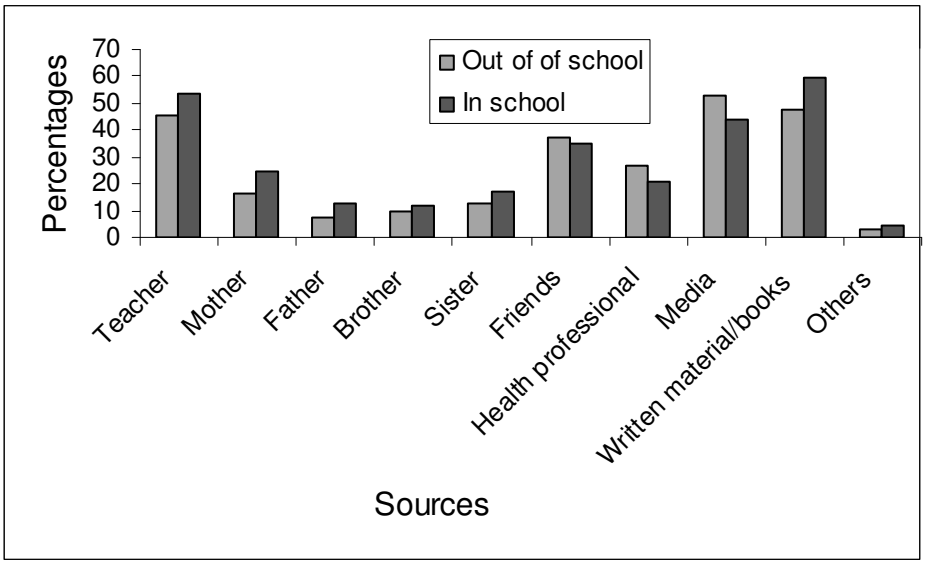
* indicate statistical significance

Fischer exact test was used when chi-square test was not applicable

Table 2.2. Distribution of respondents by spontaneously named contraceptive methods and schooling status, Addis Ababa, November 2003

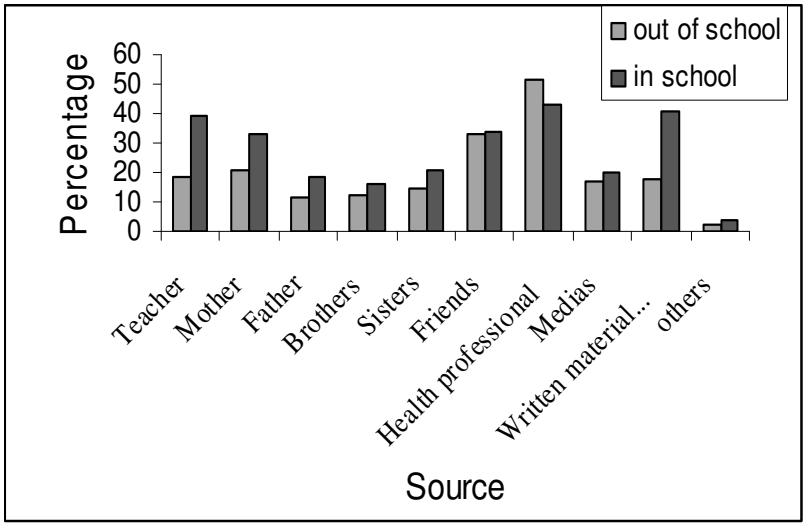
Method	Out of school Number (percent)	In school Number (Percent)	P value
Pill	510 (69.5)	662 (85.4)	0.0001*
Condom	501 (68.3)	614 (79.2)	0.002*
inject able	356 (48.5)	484 (62.5)	0.0001*
Natural methods	93 (12.7)	205 (26.5)	0.0001*
Norplant	64 (8.7)	146 (18.8)	0.0001*
IUD	65 (8.9)	136 (17.5)	0.0001*
Tubal legations	21 (2.1)	92 (11.9)	0.0001*
Foam/jell	32 (4.4)	64 (8.3)	0.0001*
Vasectomy	14 (1.9)	66 (8.5)	0.0001*
Others	2 (0.3)	25 (3.2)	0.0001*

NB: Percentages add up more than 100% because more than one answer was possible
: P was calculated from chi-square test
* Indicate statistical significance



NB: Percentages add up more than 100% because more than one answer was possible

Figure 1.1. Distribution of respondents by sources of information about contraceptive and schooling status Addis Ababa, November, 2003



NB: Percentages add up more than 100% because more than one answer was possible

Figure 1.2. Distribution of respondents by preferred sources of information about cp and schooling status Addis Ababa, November 2003

Table2.3. Distribution of respondents by spontaneously named sources of contraceptive and schooling status Addis Ababa, November 2003

	Out of school Number (percent)	In school Numbers (percent)	P value
Government hospital/health center	320 (49.1)	370 (56.1)	0.011*
Pharmacy	173 (26.5)	268 (40.6)	0.000*
Private hospital/clinic	131(20.1)	201 (30.5)	0.000*
NGO institution	111(17.0)	100 (15.2)	0.356
Shops	55 (8.4)	126 (19.1)	0.000*
Youth center	47 (7.2)	58 (8.8)	0.292
Others	3 (0.5)	14 (2.1)	0.008*

NB: Percentages add up more than 100% because more than one answer was possible
: P was calculated from chi- square test
: * Indicate statistical significance

Sexual activity of study population

Out of 1582 respondents who responded about their sexual experiences 419 (26.5%) reported having had sexual intercourse at least once (of which only 3 in school and 25 out of school were ever married) (Table 3). Less in school than out of school (16.6% versus 36.4% OR=0.35 [95%CI=0.28, 0.44]) reported to have had sexual intercourse. Less female adolescents than male (10.9% versus 21.9% among in school, and (28.8% versus 42.2% among out of school respectively) were sexually active. Sexual activity increases as age increase with in the study population. On the same line sexual activity among in school adolescents aged 15-19 were ten times higher than those aged 13-14 (17.6% versus 2.0% OR =10.443 [95%CI=1.43, 76.31]). Similarly the sexual activity among out of school adolescents aged 15-19 was about seven times higher than those aged 13-14 (7.1% versus 36.4 OR=7.6 [95%CI=0.99, 58. 39%]). The mean age at sexual debut was 15.94 with SD of 1.74 years for in school adolescents and 16.51 SD of 1.66 years for out of school adolescents. The difference in age at sexual debut was statistically significant.

Of the 131 sexually active female adolescents who responded for question that asked whether they had been pregnant, 22 (56.4%) in schoolgirls and 45 (48.9% out of schoolgirls admitted for ever had been pregnant at least once. Of which higher proportion of in school 14 (63.6%) than out of school 23 (51.1%) ended up in abortion. While more out of school than in school 12 (26.7%) versus 5 (22.7%) have given birth. More out of school 5 (11.1%) than in school 1 (4.5%) had both birth and abortion. Eleven out of sixteen births among out of school and one out of six births among in school female adolescents were with in marriage.

Table 3. Sexual activity of respondents by sex and schooling status, Addis Ababa, November, 2003

	Ever had sex		
	Yes	No	
	Number (percent)	Number (percent)	OR [95%CI]
Out of school	288 (36.4)	504 (63.6)	0.35[.28,44]
In school	131(16.6)	659 (83.4)	
Out school			
Male	188 (42.2)	257 (57.8)	
Female	100 (28.8)	247 (71.2)	0.55[0.41,75]
In school			
Male	89 (21.9)	317 (78.1)	
Female	42 910.9)	342 (89.1)	0.44[0.29,0.65]

NB: Sample size vary due to the missing responses analysis was done on valid N

Contraceptive use

As indicate in table 4.1, 57.5% in school and 61.4% out of school sexually active adolescents ever used cp. A significantly higher proportion of male adolescents than females (64.8% versus 51.1%) ever used cp. More in school ever users than out of school (76.7% versus 62.9%) used cp during the first sexual intercourse. While more out of school than in school ever users (87.4% versus 82.2%) used cp during the last sexual intercourse (Table 4.2). A significantly higher proportion of in school ever users than out of school (49.3% versus 28.6%) confirmed they consistently used cp during every sexual intercourse (Table 4.2).The level of consistent use of cp for the whole sexually active respondents was 17.5% for out of school and 28.6% for in school respondents. Of the first time users 47 (83.9%) in school adolescents and 96 (87.3%) out of school adolescents used modern methods. And of those adolescents who used cp during the last intercourse 54 (90%) in school and 144 (94.1%) out of school used modern methods. Condom was most frequently used method by the majority of first and last time users (figure 2.1, 2.2). Higher proportions of male than female adolescents used condom, while higher proportions females than male used pill, injectable and rhythm methods (figure 2.3).

The reasons to choose the method used during the last intercourse were having better knowledge for (62 (40.5%) versus 13 (25.0%), ease to get the method for 32 (20.9%) versus (14 (26.9%)) and affordability for (11 (7.2%) versus 6 (11.5%)) out of school and in school adolescents respectively.

Shops and government hospital/health center were sources of cp for considerably high proportion of last time users (Table 4.3).

The first reasons to get cp used during the last intercourse from selected sources were; availability in short distance for 8 (15.1%) of out of school and 46 (32.2%) of in school, no need of prescription for 36 (25.2% of out of school and 12 (22.6%) in school and no need of registration for 2 (1.4%) of out of school and 12 (22.6%) of in school adolescents. The second reasons to use cp from selected sources for the last time users were; affordability for 54 (39.4%) out of school and 14 (26.9%) of in school, no need of prescription for 27 (19.7%) of out of school and 10 (19.2%) of in school, short waiting for 17 (12.4%) of out of school and 8 (15.4%) of in school and good providers attitude for 8 (15.4%) of in school and 6 (4.4%) of out of school adolescents.

The purposes of taking contraceptive used during the last intercourse were; for 75 (49.3%) out of school and 25 (41.7%) in school adolescents prevention of pregnancy, for 13 (21.6%) in school and 32 (21.1%) out of school adolescents prevention of STIs and for 21 (35%) in school and 39 (25.7%) out of school adolescents prevention of pregnancy and STIs.

Table 4.1. Distribution of respondents by ever use of contraceptive and schooling status, Addis Ababa, November 2003

Variable	Contraceptive ever use			
	Yes	No		
	Number (percent)	Number (percent)	X^2	P value
Out of school	175 (61.4)	110 (38.6)	0.56	0.453
In school	73 (57.5)	54 (42.5)		
Use of cp by sex				
Female	71(51.1)	68(48.9)	7.27	0.007***
Male	177 (64.8)	96 (35.2)		

NB: Sample size vary due to the missing responses analysis was done on valid N

* Indicate statistical significance

Table 4.2. Use of contraceptive during the first, last intercourse, and consistent use and Schooling status, Addis Ababa, November 2003

Time	Contraceptive use				
	Yes	No	Don't remember		
	Number(percent)	Number(percent)	Number (percent)	X^2	P value
Fist time use					
out of school	110 (62.9)	57 (32.6)	8 (4.6)		
In school	56 (76.7)	14 (19.7)	3 (4.1)	4.73	0.094
last time use					
Out of school	153 (87.4)	22 (12.6)			
In school	60 (82.2)	13 (17.8)		1.17	0.280
Consistent use					
Out of school	50 (28.6)	125 (71.4)			
In school	36 (49.3)	37 (50.7)		9.79	0.002*

NB: Sample size vary due to the missing responses analysis was done on valid N

* Indicate statistical significance

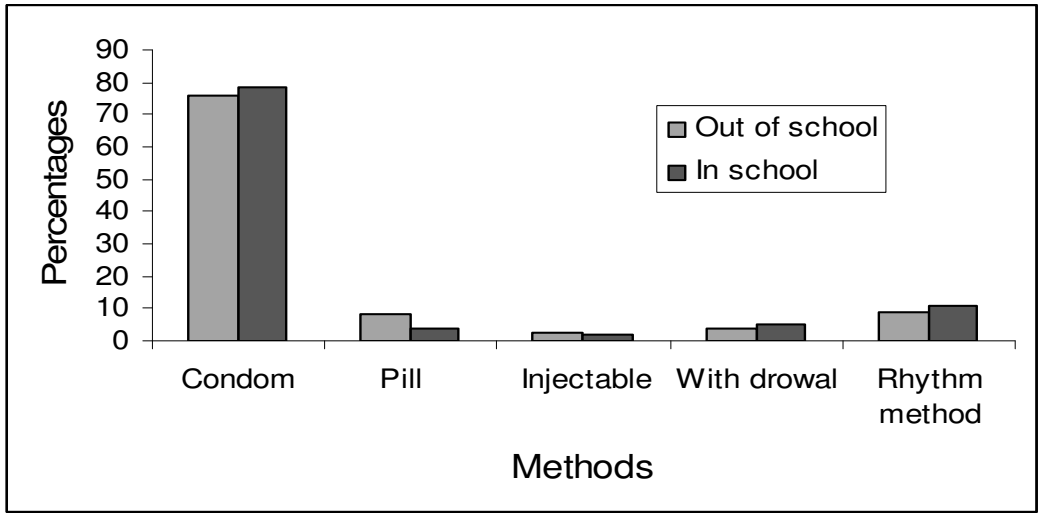


Figure 2.1. Distribution of respondent by contraceptive used during the first intercourse and Schooling status, Addis Ababa, November 2003

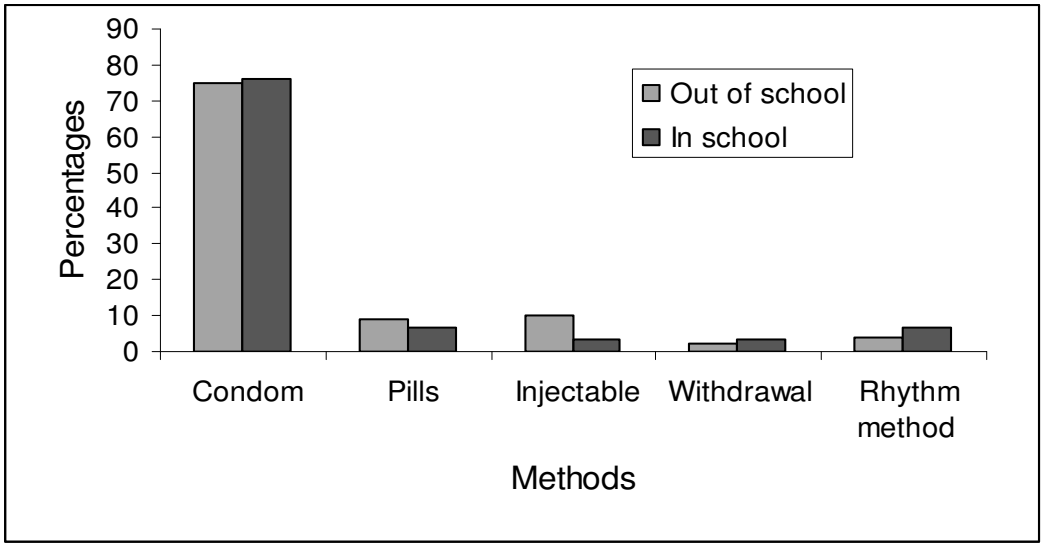


Figure 2.2. Distribution of respondent by contraceptive used during the last intercourse and schooling status, Addis Ababa, November 2003

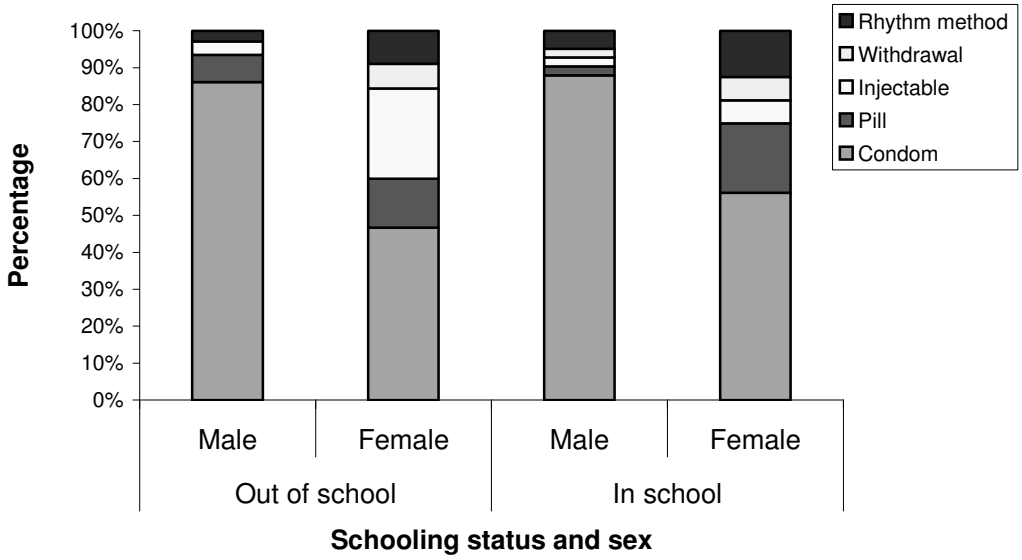


Figure 2.3. Distribution of respondent by contraceptive used during the last intercourse by sex and schooling status, Addis Ababa, November 2003

Table 4.3. Distribution of respondents by source of contraceptive used at last intercourse and schooling status, Addis Ababa, November 2003

Sources	Out of school Number (percent)	In school Number (percent)
Shops	47 (32.9)	4 (46.2)
Government hospital/health center	32 (22.4)	3 (5.8)
Pharmacy	16 (11.2)	8 (15.4)
Private hospital/clinic	19 (13.3)	6 (11.5)
Youth center	12 (8.4)	8 (15.4)
NGO health institution	12 (8.4)	2 (3.8)
Others	4 (3.5)	1 (1.9)

NB: Sample size vary due to the missing responses analysis was done on valid N

Views of adolescents to wards contraceptives

A higher proportion of out of school adolescents than in school (88.1%versus 86.3%) were interested to know more about cp (Table 5). When asked the reason for being interested to know more about cp, 149 (25.0%) in school and 91 (16.6%) out of school cited to plan their future family according to their economy, 148 (24.8%) in school and 119 (21.8%) out of school cited to protect themselves or their partner from unwanted pregnancy, 80 (14%) out of school and 70 (11.7%) in school said it is important to know, 26 (4.8%) out of school and 33 (5.5%) in school claimed for proper future use and 181 (33%) out of school and 131 (21.9%) in school adolescents cited to know more about cp. The reasons for not being interested to know more about cp were, for 28 (32.2%) in school and 15 (28.3%) out of school said they knew enough, 10 (11.5%) in school and 5 (9.4%) out of school reported they don't need to know. The responses of 19 (35.8%) out of school and 23 (26.4%) in school adolescences were divers and difficult to group.

When asked to choose the one that best expresses their feeling about cp (Table 5). A higher proportion of in school than out of school (34.5% versus 22.6%) claimed that cp are very important. while more out of school than in school (4.8% versus 2.6%) felt that contraceptives are dangerous to health. A significantly higher proportion of out of schools adolescents than in school (88.2% versus 81.0%) approves use of cp by adolescents. When asked about who should take the responsibility to use cp, a significantly higher proportion of in school adolescents than out of school (85.0% versus 77.5%) reported that both male and female partner should be responsible.

Table 5.Distribution of respondents by views to wards cp and schooling status, Addis Ababa, November 2003

Variable	Out of school Number (percent	In school Number (percent)	P value
Interested to know about cp			
Yes	677 (88.1)	650 (83.3)	
No	91 (11.9)	102 (13.7)	0.099
Feeling about cp:			
More people should know about cp	252 (33.6)	216 (28.0)	
All sexually active who don't want to have children should use cp	212 (29.5)	228 (29.8)	
Cp are very useful	170 (22.6)	264 (34.5)	
Cp are dangerous to health	36 (4.8)	21 (2.6)	
Cp are not useful as some people say	29 (3.9)	16 (2.1)	
Cp are not important	26 (3.1)	17 (2.2)	0.0001*
Approve use of cp by adolescents			
Yes	683 (88.2)	629 (81.0)	
No	85 (11.0)	132 (17.0)	
Others	6 (0.8)	16 (2.1)	0.0001*
Who should be responsible to use cp			
Both partner	596 (77.5)	652 (85)	
Female partner	151 (19.6)	103 (13.4)	
Male partner	21 (2.9)	12 (1.6)	0.0001*

NB: Sample size vary due to the missing responses analysis was done on valid N

*Indicate significance

: P was calculated from chi-square test

Future plan to use contraceptive

As indicated in Table7.1 higher proportion respondents 81% of out of school and of 83.1% of in school adolescents have future plan to use contraceptive. Of those who plan to use cp in the future, 79.9% of out of school and 76.8% of in school planned to use modern methods. Condom, injectable and pill were the three most preferred modern methods for future use in their respective orders. More out of school 180 (38.1%) than in school 135 (34.1%) preferred condom. Another higher proportion of out of school 103 (21.8%) than in school 73 (18.4%) preferred injectable. Whereas more in school 73 (22.7%) than out of school 84 (17.8%) preferred pills for future use. The differences in preferred modern method for future use were statistically significant.

The sex difference in preferred modern methods for future use is presented in figure3.

Ease to use, effectiveness and affordability were the three most frequently reported reasons to choose the preferred modern methods for future use by 256 (48.5%) versus 234 (53.7), 243 (46.0%) versus 95 (45%) and 159 (30.1%) versus 134 (30.7%) in and out of school adolescents respectively in their respective orders.

Table 6.1.Distribution of adolescents by future plan to use cp, and schooling status, Addis Ababa, November 2003

Variable	Out of school Number (percent)	In school Number (percent)	X^2	P value
Have future plan to use cp				
Yes	624 (81.0)	597 (83.1)	1.12	0.289
No	146 (19.0)	121 (16.9)		
Preferred future methods				
Modern	486 (79.9)	454 (76.8)		
Natural	67 (11.0)	89(15.1)		
Both natural and modern	55(9.0)	48 (8.1)	4.43	0.109

NB: Sample size vary due to the missing responses analysis was done on valid N

- Indicate statistical significance

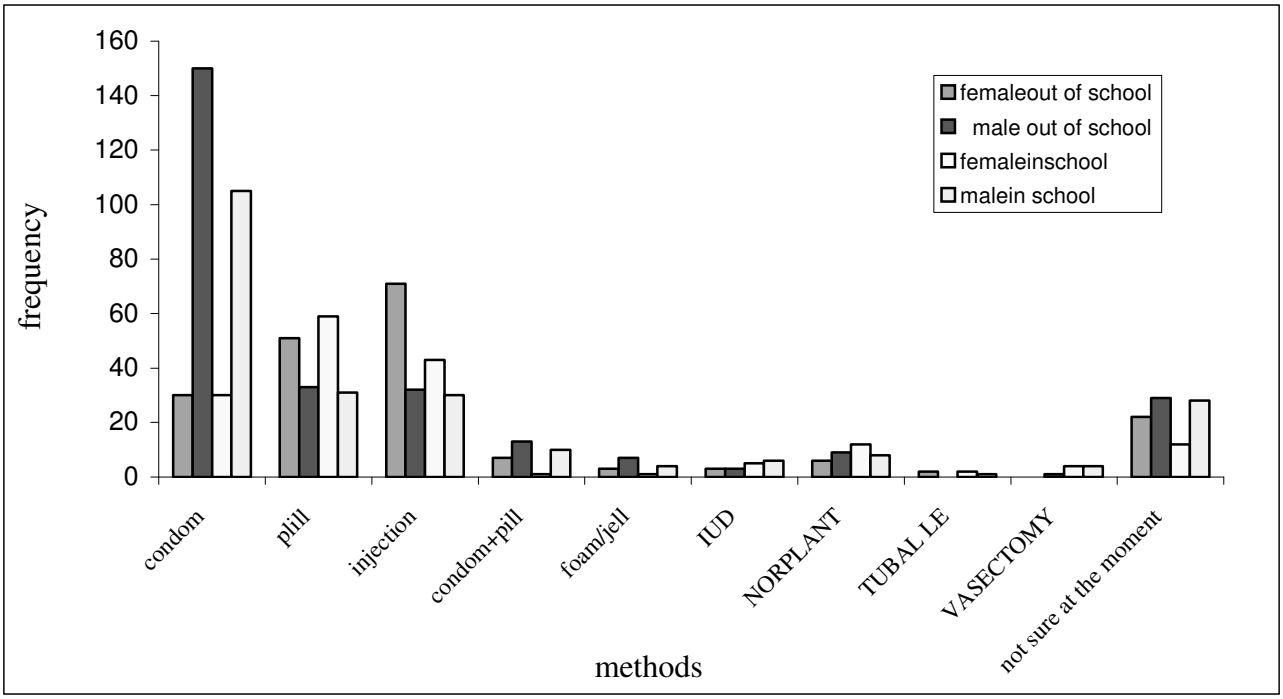


Figure.3. Preferred modern methods for future use by sex and schooling status, Addis Ababa, November 2003

Preferred sources of contraceptive for future use

As indicated in Table7.2 Government Hospitals/health centers, pharmacies and private Hospitals/clinics were the three most preferred sources of cp for future use in their respective orders. Providers explain well how to use, presence of special place for adolescents and affordability were the three most frequently reported criteria used to choose sources for future in their respective orders (figure 4).

Table 7.Distribution of respondent by preferred sources of contraceptive for future use and schooling status, Addis Ababa, November 2003

Sources	Out of schools Number (percent)	In school Number (percent)	X^2	P value
Government hospital/health center	211(44.2)	113 (29.1)	40.84	0.0001*
Pharmacy	66 (13.8)	54 (13.8)		
Private hospital/clinic	37 (7.8)	61(15.6)		
Youth center	43 (9.0)	47 (12.1)		
NGO health institute	26 (5.5)	14 (3.6)		
Shops	6 (1.3)	21 (5.4)		
Not sure which one is good	119 (23.7)	134 (30.2)		

NB: Sample size vary due to the missing responses analysis was done on valid N
* Indicate statistical significance

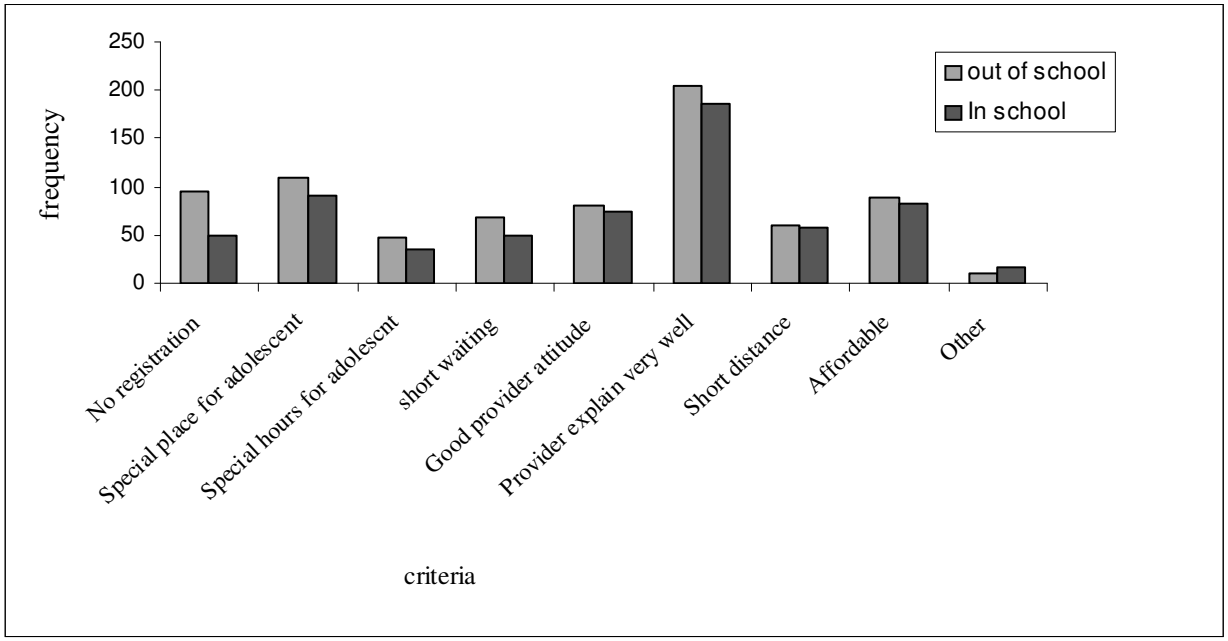


Figure 4. Distribution of respondent by criteria used to choose preferred contraceptive sources for Future use

Barriers to use contraceptive by adolescents

Assessments of problem faced by sexually active ever user of cp revealed that ashamed to buy, lack of knowledge how to use properly and partner disapproval were the first three frequently reported problems faced by sexually active ever users in their respective orders (Table 8).

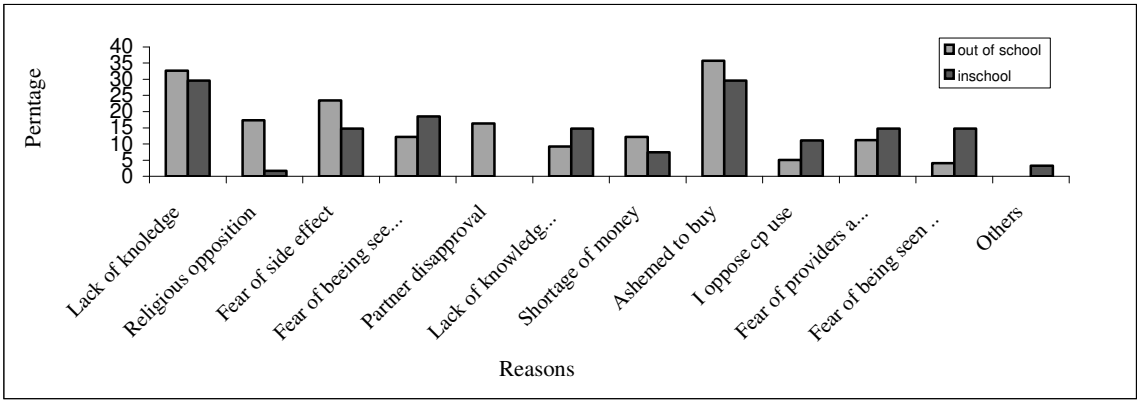
The sex difference in problem faced by ever users to use cp within the same study population showed, more out of school male than female faced ashamed to buy and lack of knowledge 48 (41.7%) versus 9 (18.0%) and 31 (26.7% respectively). A higher proportion of out of school female than out of school male faced parent and partner disapproval (10 (20.0% versus 15 (12.9%) and 9 (18%) versus 19 (16.5%) respectively in their respective orders. More in school male than female faced ashamed to buy (16 (35.6% versus 4 (25.0% respectively). While higher proportion of in school female than in school male (6 (37.5% versus 8 (17.8%) faced lack of knowledge.

Ashamed to buy, lack of knowledge and fear of side effect were the three most frequently reported reasons for ever-non-use of cp in their respective orders (figure5).

Table 8: Distribution of ever user of contraceptive by problems faced to use contraceptive and schooling status, Addis Ababa November 2003

Problem faced	Out of school Number (percent)	In school Number (percent)	OR[95%CI]
Ashamed to buy	57 (34.5)	20 (32.8)	0.92[0.5,1.72]
Lack of knowledge how to use	38 (22.9)	14 (23.0)	1.0[.5,2.02]
Partner disapproval	28 (17.0)	8 (13.1)	0.74[0.32,.1.72]
Fear of side effect	31 (18.8)	4 (6.6)	0.30[0.10,.9]
Parent disapproval	25 (15.1)	9 (14.8)	0.98[0.43,2.23]
Shortage of money	22 (23.9)	8 (13.1)	0.988[0.42,2.35]
Bad providers attitude	18 (10.9)	9 (14.8)	1.41[0.82,1.47]
Do not know where to find cp	10 (6.1)	5 (8.2)	1.38[0.45,4.23]
Long waiting at institutions	11 (6.6)	1 (1.6)	0.24[0.03,1.86]
Religious opposition	4 (10.8)	1 (100)	1.25[.81,1.94]

NB: Percentages add up more than 100% because more than one answer were possible



NB: percentages add up more than 100% because more than one answer was possible

Figure 5. Distribution of Sexually active ever-non-user by reasons for ever non use and schooling status, Addis Ababa, November, 2003

Association of contraceptive ever use among sexually active adolescents and selected social, demographic and personal characteristics

As indicated in Table 9.1, there was statistically significant association betweens ever use of cp and adolescent's sex and age, more male adolescents than female (64.8% versus 51.1% respectively) and less adolescents aged 15-17 than those aged 18-19 (48.0% versus 63.9% respectively) ever used cp. While, marital status, schooling status, religious afflation and frequency of attending religious services did not showed association with ever use of cp. There was statically significant association between with whom adolescents live and ever use of cp. Accordingly higher proportion of adolescents who were living with both parents than those living with single parent and others (64.1% versus 63.3% versus 50% respectively ever used cp.

There was a statistically significant association between parent education and ever use of cp. On the same line, adolescents who have mother with secondary and above education ever used cp than those whose mother have no and informal education, elementary education or those who do not know/ not applicable (71.8% versus 64.4% versus 63.8% versus 48.9% respectively). Similarly adolescents who have father with above secondary education ever used cp than those whose father have no and informal education, elementary education, secondary education, or those who do not know/ not applicable (75% versus 55.6% versus 72.7% versus, 53.6%, versus 56.4% respectively) ever used cp. However, frequency of discussing sex related matters with the parents did not showed statistically significant association with ever use of cp.

Adolescent's access to money either through receiving pocket money or working for pay has statistically significant association with ever use of cp. Accordingly higher proportion of adolescent who received pocket money than who didn't (73.2% versus 54.7% respectively) and works for a pay than who didn't (69.1% versus 57% respectively) ever used cp. Furthermore adolescents' knowledge of cp and sources had statistically significant association with ever use of cp. By the same token higher proportion of adolescents who spontaneously named at least one cp (64.2% versus 39.7%) and spontaneously named at least one source (66.8% versus 51.2%) ever used cp than those who did not. It has also been indicated that discussion about cp with friends and views of adolescents toward cp had statistically significant association with ever use of cp. Accordingly more adolescents who discuss cp with their friends than their counterparts (68.4% versus 49.1% respectively) and adolescents who approve use of cp by adolescent than who didn't (63.5% versus 33.3% respectively) ever used cp.

Among the independent factors that showed statistically significant association with ever use of cp in our bivariate analysis, age of adolescents, discussion about cp with friends and views of approving adolescents cp use maintained significant effect when possible confounding effect of other covariates were controlled using multiple logistic regression (Table 9.2). Accordingly adolescents aged 15-17 were less likely to ever use cp than those aged 18-19 OR=0.78 [95%*CI*=0.34, 0.97]. Odds of ever use of cp was two times higher among adolescents who discuss cp with their friends than their counter parts OR=2 [95%*CI*=1.26, 3.10]. Moreover, odds of ever use of cp was about three times higher among adolescents who approve use of cp by adolescents than who didn't OR=3.08 [95%CI=1.41, 6.74].

Table 9.1.Chi-square test result for the association between ever use of contraceptive and selected Scio economic, demographic and personal knowledge and other characteristics of adolescent in the city of Addis Ababa, November 2003

	Ever use of contraceptive			
	Yes	No		
Variable	Number (percent)	Number (percent)	X^2	P value
Sex				
Male	177 (64.8)	96 (35.2)		
Female	71 (51.1)	68 (48.9)	7.27	0.007*
Age group				
15-17	47 (48.0)	51 (52.0)		
18-19	200 (63.9)	113 (36.1)	7.91	0.005*
Marital status				
Never married	237 (61.1)	151(39.9)		
Married	11 (50.0)	11 (50.0)	1.07	0.301
Schooling Status				
Out of school	175 (61.4)	110(38.6)		
In school	73 (57.5)	54 (42.5)	056	0.453
Religion				
Orthodox Christian	214 (60.5)	140 (39.5)		
Other Christian	21 (63.6)	12 (36.4)		
Muslim	13 (63.6)	11 (45.8)	0.53	0.766
Attend religious service				
Daily				
Weekly	52 (57.8)	38 (42.2)		
Monthly	113 (57.4)	84 (42.6)		
Yearly	54 (67.5	26 (32.5)		
Never	12 (54.5)	10 (45.5)		
	17 (77.3)	5 (22.7)	5.64	0.228
Live with				
Both parent	132 (64.1)	74 (35.9)		
Single parent	62 (63.3)	36 (36.7)		
Others	54 (50)	54 (50.0)	6.37	0.041*
Father education				
Illiterate &informal	50 (55.6)	40 (44.4)		
Elementary	40(72.7)	15 (27.3)		
Secondary	15 (53.6)	13 (46.4)		
Above secondary	33 (75.0)	11 (25.0)		
Don't know/NA	110(56.4)	85 (43.6)	10.12	0.039*
Discussion of sex related matter with father				
Often	8 (80.0)	2 (20.0)		

Occasionally	55 (64.7)	30 (35.3)		
Never	73 (60.8)	47 (39.2)	1.59	0.452
Mother education				
Illiterate& informal	103 (64..4)	57 (35.6)		
Elementary	30(63.8)	17 (36.2)		
Secondary	20 (69.0)	9 (31.0)		
Above secondary	26 (74.3)	9 (25.70)		
Don't know/NA	69 (48.9)	72 (51.1)	12.72	0.013*
Discussion of sex related mater with mother				
Often	20 (64.5)	11(35.5)		
Occasionally	92 (65.2)	49 (34.8)		
Never	70 (61.4)	44 (38.6)	0.41	0.813
Perceived economic status				
Poor	77 (55.4)	62 (44.6)		
Medium	155 (62.2)	94 (37.8)		
Rich	16 (69.6)	7 (30.4)	2.62	0.270
Parent Job status				
Both work	59 (60.2)	39 (39.8)		
One parent work	116 (59.8)	78 40.2)		
Both don't work	50 (60.2)	33 (40.2)	0.007	0.996
Pocket money				
Yes	90 (73.2)	33 (26.8)		
No	158 (55.1)	131(44.9)	12.32	0.0001*
Working for pay				
Yes	76 (69.1)	34 (30.9)		
No	172 (57.0)	130 (43.0)	4.96	0.026*
Discussion of cp with friends				
Yes	162 (68.4)	75 (31.6)		
No	86 (49.1)	89 (50.9)	15.51	0.000*
Spontaneously name one cp				
Yes	221(64.2)	123 (35.8)		
No	27 (39.7)	41 (60.3)	14.27	0.000*
Spontaneously named one source of cp				
Yes	159 (66.8)	79 (33.2)		
No	88 (51.2)	84 (48.8)	10.20	0.001*
Approve use of cp				
Yes	231 (63.5)	133 (36.5)		
No	12 (33.3)	24 (66.7)	12.47	0.001*
Fleeing about cp				
Positive	214 (60.6)	139 (39.4)		
Negative	26 (61.9)	16 (38.1)	0.014	0.906

* Indicate statistical significance

Table9.2. Multiple logistic regressions for ever use of contraceptives and selected characteristics among adolescents in the city of Addis Ababa, November 2003

Variables	Ever use of cp			
	Yes N(%)	No N(%)	OR [95%CI] Crude	OR [95%CI] Adjusted
Sex				
Male	177 (64.8)	96(35.2)	1.77[1.14,2.73]	1.42[0.88,2.30]
Female	71 (51.1)	68(48..9)	1.00	1.00
Age				
15-17	47 (48.0)	51(52)	0.52[.32,0.84]	0.77[0.34,0.97]*
18-19	200 (63.9)	113(36.1)	1.00	1.00
Live with				
Both parents	132(64.1)	74(35.9)	1.35 [0.46,3.97]	1.35[0.46,3.97]
Others	54(50.0)	54(50.0)	1.19 [043,3.23]	1.19[0.43,3.23]
Single parent	62(63.3)	36(36.7)	1.00	1.00
Father education				
Elementary	40(72.7)	15(27.3)	2.13 [0.98,4.70]	0.62[0.19,1.98]
Secondary& Above	48 (66.7)	24(33.3)	2.74[1.25,6.06]	1.01[0.28,3.63]
Don't know/NA	110(56.4)	85(43.6)	1.04[0.61,1.77]	0.79[0.23,2.73]
Illiterate &informal	50 (55.6)	40(44.4)	1.00	1.00
Maternal education				
Elementary	30(63.8)	17(36.2)	0.98[4.47,2.03]	0.82[.38,1.79]
Secondary & Above	46(71.8)	18(28.2)	0.80[.38,1.67]	1.12[0.49,2.59]
Do no know/NA	69 (48.9)	72(51.1)	0.53[0.33,0.86]	0.49[0.19,1.24]
Illiterate& informal	103(64.4)	57(35.6)	1.00	1.00
Pocket money				
Yes	90(73.2)	33(26.8)	2.26 [1.39,3.68]	1.51[0.88,2.29]
No	158(54.7)	131(45.3)	1.00	1.00
Working for pay				
Yes	76(69.1)	34(30.9)	1.69 [1.04,2.76]	1.33[0.78,2.29]
No	172(57.0)	130(43)	1.00	1.00
Discussing cp with friends				
Yes	162(68.4)	75(31.6)	2.24 [1.46,3.42]	2[1.26,3.10]*
No	86(49.1)	89(50.9)	1.00	1.00

Spontaneously named at least one method				
Yes	221(64.2)	123(38.8)	2.73 [1.55,4.82]	1.67[.87,3.22]
No	27(39.7)	41(60.3)	1.00	1.00
Spontaneously named at least one source				
Yes	159 (66.8)	79(33.2)	1.92[1.26,2.93]	1.37[0.84,2.22]
No	88 (51.2)	84(48.8)	1.00	1.00
Approves use of cp by adolescent				
Yes	231(63.5)	133(36.5)	3.47[1.60,7.64]	3.08[1.41,6.74]*
No	12(33.3)	24(66.7)	1.00	1.00

* Indicant significance when OR does not cross one

Association of consistent use of contraceptive among sexually active ever users and selected social, demographic and personal characteristics

As indicated in detail in Table 10.1 sex and schooling status had statistically significant association with consistent use of cp. Accordingly higher proportion of male ever users than their female counter parts (39% versus 22.9% respectively) and more in school ever users than out of school (49.3% versus 28.6% respectively) consistently used cp. Age and marital status did not showed statistically significant association with consistent use of cp. It was also depicted that adolescent's religious affiliation and religious services attendance had statically significant association with consistent use, more Muslim than orthodox Christian or other Christian (53.8% versus 35.8% versus 9.1% respectively) and more adolescents who attend religious services at least yearly than those who attend the services daily, weekly, monthly or never, (66.7% versus 21.6% versus 28.6%, versus 48.1% versus 44.4% respectively) consistently used cp.

Moreover, frequency of discussing sex related matters with the mother showed statistically significant inverse association with consistent use of cp. Accordingly higher proportion of adolescents who never discussed sex related matters with the mother consistently used cp than those who discussed often or occasionally (40.8% versus 10.0%, versus 36.6% respectively). Consistent use of cp has also showed statistically significant association with perceived family economic status and receiving pocket money. Accordingly more ever users from perceived medium economic status family than their counterpart from perceived poor or rich economic status family (40.1% versus 25.3% versus 20.0% respectively) and

more ever users who received pocket money than those who did not (37.6%, versus 29.7% respectively) consistently used cp.

Adolescents' knowledge of cp, knowledge of sources and views towards adolescent cp use showed statistically significant association with consistent use of cp. By the same token higher proportion of ever users who spontaneously named at least one cp than those who did not (37.6% versus 11.1% respectively), more ever users who spontaneously named at least one source of cp than those who did not (43.4% versus 19.1% respectively) and more ever users who approve use of cp by adolescent than those who did not (35.9% versus 8.3% respectively) consistently used cp.

When controlled for possible confounding effects of other covariates that showed association with consistent use of cp in our bivariate analysis, only religious affiliations of adolescents, discussions of sex related matters with the mother, and knowledge of sources of cp maintained statistically significant association with consistent use of cp (Table 10.2). Accordingly other Christian ever users were less likely to consistently use cp OR=0.05 [95%CI=0.005, 0.81]. Adolescents who often discus sex related matter with the mother were also less likely to consistently use cp OR=0.11[95%CI=0.02, 0.69]. While odds of consistent use of cp was about three times higher among ever users who knew at least one source of cp than who did not OR=2.87[95%CI=1.12, 6.40]

Table 10.1 Chi-square test for the association between consistent uses of contraceptive and selected socioeconomic, demographic and personal characteristics of ever users adolescent in the city of Addis Ababa, November 2003

	Consistent use of contraceptive			
Variable	Yes Number (percent)	No Number (percent)	X^2	P value
Sex				
Male	69 (39.0)	108 (61.0)		
Female	16 (22.9)	54 (77.1)	5.78	0.016*
Age group				
15-17	18 (40)	27 (60.8)		
18-19	67 (33.3)	130 (66.7)	0.723	0.395
Marital status				
Never married	81(34.5)	154 (65.5)		
Married	4 (36.4)	7 (63.6)	0.017	0.897
Schooling Status				
Out of school	50 (28.6)	125 (71.4)		
In school	36 (49.3)	37 (50.7)	9.79	0.002*
Religion				
Orthodox Christian	76 (35.8)	136 (64.2)		
Other Christian	2 (9.1)	20 (90.9)		
Muslim	7 (53.8)	6 (46.2)	8.619	0.013*
Attend religious service				
Daily				
Weekly	11 (21.6)	40 (78.4)		
Monthly	32 (28.6)	80 (71.4)		
Yearly	26 (48.1)	28 (51.9)		
Never	8 (66.7)	4 (33.3)		
	8 (44.4)	10 (55.6)	16.27	0.003*
Live with				
Both parent	47 (36.2)	83 (63.8)		
Single parent	23 (37.7)	38 (62.3)		
Others	15 (26.8)	41 (73.2)	1.91	0.385
Father education				
Illiterate & informal	19 (38.8)	31 (62.0)		

Elementary	13 (31.7)	28 (68.3)		
Secondary	4 (38.6)	10 (71.4)		
Above secondary	14 (45.2)	17 (54.8.0)		
Don't know/NA	35 (31.5)	76 (68.5)	2.63	0.622
Discussion of sex related matter with father				
Often	2 (25.0)	6 (75.0)		
Occasionally	19 (33.9)	37 (66.1)		
Never	29 (41.4)	41 (58.6)	1.30	0.522
Mother education				
Illiterate& informal	31 (31)	69 (69)		
Elementary	13 (41.9)	18 (58.1)		
Secondary	8 (42.1)	11 (57.9)		
Above secondary	13 (50.0)	13 (50.0)		
Don't know/NA	20 (28.2)	51 (71.8)	5.82	0.213
Discussion of sex related mater with mother				
Often	2 (10.0)	18 (90.0)		
Occasionally	34 (36.6)	59 (63.4)		
Never	29 (40.8)	42 (59.2)	6.68	0.036*
Perceived economic status				
Poor	19 (25.3)	56 (74.7)		
Medium	63 (40.1)	94 (59.9)		
Rich	3 (20.0)	12 (80.0)	6.39	0.041*
Parent Job status				
Both work	18 (31.0)	40 (69.0)		
One parent work	43 (37.4)	72 (62.6)		
Both don't work	16 (31.4)	35 (68.6)	0.96	0.620
Pocket money				
Yes	39 (43.3)	51 (56.7)		
No	47 (29.7)	111 (70.3)	4.67	0.031*
Working for pay				
Yes	23 (30.3)	53 (69.7)		
No	63 (36.6)	130 (43.0)	0.943	0.312
Discussion of cp with friends				
Yes	57 (35.2)	105 (64.8)		

No	29 (33.7)	57 (66.3)	0.05	0.818
Spontaneously name one cp				
Yes	83 (37.6)	138 (62.4)		
No	3 (11.1)	24 (88.9)	7.43	0.006*
Spontaneously named one source of cp				
Yes	69 (43.4)	90 (56.6)		
No	17 (19.1)	72 (80.9)	14.47	0.000*
Approve use of cp				
Yes	83 (35.9)	148 (64.1)		
No	1 (8.3)	11 (91.7)	3.8	0.062
Fleeing about cp				
Positive	77 36.0	137 (64.0)		
Negative	8 (30.8)	18 (69.2)	0.28	0.600

* Indicant statistical significance when OR does not cross one

Table 10.2. Multiple logistic regressions for consistent use of contraceptives and selected characteristics among adolescent ever users in the city of Addis Ababa, November 2003

Variables	Consistent use of cp			
	Yes	No	Crude	Adjusted
	Number (%)	Number (%)	OR [95%CI]	O R [95% CI]
Sex				
Male	69 (39.0)	108 (61.0)	2.16 [1.10,4.28]	1.4 [.56,3.26]
Female	16 (22.9)	54 (77.1)	1.00	1.00
Age group				
15-17	18 (40)	27 (60.8)	1.29[.63,2.64]	1.66[.61,4.54]
18-19	67 (33.3)	130 (66.7)	1.00	1.00
Schooling status				
Out of school	50 (28.6)	125 (71.4)	0.41 [0.22,75]	0.47 [0.2,1.12]
In school	36 (49.3)	37 50.7)	1.00	1.00
Frequency of religious service attendance				
Daily	11 (21.6)	40(78.4)	0.34 [0.09,1.34]	0 .20 [0.04,1.05]
At least weekly	32 (28.6)	80 (71.4)	0.50 [0.16,1.55]	0 .77 [0.19,3.18]
At least monthly	26 (48.1)	28 (51.9)	1.15 [0.35,3.87]	2.08 [0.45,9.55]
At least yearly	8 (66.7)	4 (33.3)	2.50 [0.44,15.21]	4.05 [0.42,38.30]
Never	8(44.4)	10 (55.6)	1.00	1.00
Economic status of the family				
Poor	19(25.3)	56(74.7)	1.36 [0.31,6.82]	0 .56 [.09,3.31]
Medium	63(40.1)	94(59.9)	2.68 [0.67,12.51]	1.58[.33,7.57]
Rich	3 (20.0)	12(80.0)	1.00	1.00
Discussing sex related matters with mother				
Often	2 (10.0)	18 (90.0)	0.16 [0.02,0.81]	0 .11[0.02,0.69]*
Occasionally	34 (36.6)	59 (63.4)	0.83 [0.42,1.65]	0 .72 [0.32,1.61]
Never	29 (40.8)	42 (59.2)	1.00	1.00

Spontaneously named at least one method				
Yes	83 (37.6)	138 (62.4)	4.02 [1.39,21.60]	4.99 [0.55,45.76]
No	3 (11.1)	24 (88.9)	1.00	1.00
Spontaneously named at least one source				
Yes	69 (43.4)	90 (56.6)	3.25 [1.69,6.30]	2.68 [1.12,6.4]*
No	17 (19.1)	72 (80.9)	1.00	1.00
pocket money				
Yes	39(43.3)	51(56.7)	1.81[1.02,3.21]	1.53[0.65,3.57]
No	47(29.7)	111(70.3)	1.00	1.00

* Indicant statistical significance

5.2. Result of qualitative data

Part. I: Where do adolescents spend their leisure time?

Discussants divided adolescents into two major groups with regard to the place they preferred to spend their leisure time. The first one was the 'homely' group that comprised the majority of adolescents who spend their leisure time reading books, watching television, listening to the radio, playing games with their friends or helping their parents in different kinds of activities. The second group who label themselves as modern 'Aradas' spend their leisure time in illegal video houses, khat houses, shisha houses, in bars and other houses where locally prepared beverages are sold. The age at which these two groups gradually formed was said to be at the age of 13- 14 as agreed by most discussant. It was also agreed that this age is the critical point of starting sexual relationships for some of the adolescents. As to the reason why adolescents engaged in premarital sexual activity majority of discussants agreed to be the effect of age. Discussants also rose that besides the effect of adolescent age majority of parents do not teach and guide their children the way they should handle their natural feeling. This lack of guidance about sexuality made adolescents ill-prepared to face the challenges of peer pressure. Behavioral changes like chewing khat, drinking alcohol and watching pornographic films have blurred the perceptions of adolescents to see the consequences of engaging in premarital sex. Discussants also indicated that for some adolescents' joblessness and shortage of money had made sex a cheaper alternative of having leisure time for boys and an easier way of getting an income for girls. The following were some of the expression of taken from discussion.

An in school boy said "*boys coming out after watching sex films are like activated time bombs ready to explode any minute. At this moment they cannot pass any opportunity to have sex in order to relieve the internal tension activated by the film*"

An in school girl said "*these days having a boy friend either to have a material gain and dress fancy like the well-to-do girls or to enjoy life by having sex has become a common event among girls from different economic background*"

An out of schoolboy claimed "Sex is an important means of relieving stress after a long day of struggle to get money for food, Khat and drink"

Discussants also indicated that the different segments of society treat adolescents' involvement in sexual activity differently. Most adolescent groups including those who are not sexually active take it as a normal effect of adolescent age. The majorities of immediate elders (those in twenties and in early thirties) accept sex as part of the adolescent adventure for boys and express their concern about the danger of acquiring HIV/AIDS in the process. A few who do not want to acknowledge it ignore as if it is not happening. But the majority of these groups including elder sisters disapprove of the involvement of adolescent girls in premarital sex. While the majority of parents and other people (in their late thirties and above) do not strictly oppose boys' involvement in sexual activity, though they do not acknowledge it as a normal event. However, they disapprove involvement of adolescent girls in premarital sexual activity and label it as evil and an obstacle for success. The following expressions were extracted from the discussions:

A 19 year old schoolboy said "*we know that our elder do not oppose our involvement in sexual activity because they do not advise us not have sex but to be protected from HIV/AIDS*"
A 16 year old schoolgirl said "*my sister always warned me how dangerous and shameful in front of parents and relatives it is to involve in premarital sexual activity as a girl*"

Part. II: How do you perceive the level of knowledge and use of contraceptive among adolescents?
All discussants from the four groups thought that almost all adolescents of their age living in Addis Ababa would have information about cp and where to find it if they wanted. However majority of discussants had serious doubts about whether or not most adolescents knew how to properly use cp.

A 17 year old schoolgirl had an example to give "*my friend told me that she takes a pill a night before she has an appointment with her boy friend and the next two following days which is enough to protect her from pregnancy and good to reduce the side effect*".

Most discussants indicated that adolescents have different sources of information about sex and cp. The most important sources being friends, media and biology class for cp. While friends, television and video films and in directly parents were sources of information about sex. The majority of discussants agreed that neither parents nor teachers were open to talk about sex and cp and adolescents are getting conflicting information from Medias, friends and religious services. The majority of discussants stressed that it is important that adolescents' get basic knowledge of sexuality and contraception from appropriate sources in order to avoid confusion by conflicting information from different sources. The followings were expressions taken from the discussion.

A 14-year-old schoolgirl said "*the only time I talk about sex with my mother is when she wants to warn me not to start to have sex"*

A 19 year old out of schoolboy said "*no one taught us about sex properly, however most of us who live in a single room house learn about it from our parents*"

A 17 year old out of school girl also said that "*leave alone to properly teach me my mother did not allow me or my sisters to watch television or listen to advertisements about contraceptive*"

Discussants generally thought that more than half of sexually active adolescents used cp, however, they doubt if all adolescents use cp every time they have sex. Discussants pointed out negligence, engaging in unplanned sex, having sex when the state of mind is not clear due to the influence of alcohol, khat or other substances, adventure of checking for fertility, and opposition from partner as reasons for inconsistent use.

Part. III: Do adolescents face problem in trying to use cp?

The majority of the discussants agreed that al most all adolescents face problems in trying to use cp both at the acquisition and use level. Discussants further explained that 'ashamed to

buy' as an important problem faced by almost all adolescent users of cp. This was because asking for cp means sharing one's being sexually active with a third person knowing it is not socially accepted. This might challenge the decision of many adolescents to win the fear and shame of exposing his/her secret in order to get cp. Moreover adolescents do not ask how properly they have to use cp in order to avoid further questions about their sexuality and reduce the risk of being seen by someone they know by shortening their stay with providers. Others raised the problem of being humiliated by providers while asking for cp to be an important barrier. The majority of discussants also agreed that having a long journey of life in front of them adolescents fear loss of fertility and facing other general health problems if they use cp for a long time. The long process of showing kebele identification cards and registration up to the grandfather's name in trying to get free access to cp from government institutions could also challenge the morals of adolescents to share their personal secret in the area they live. Discussants also indicated their fear that registration might facilitate identification by parents or other close persons. The following were some of the expressions extracted from the discussion.

A 19 year old out of school boy said "*if I am watched buying condoms my being sexually active will be a topic for seven coffee ceremonies until all the neighbors know about it and all my subsequent illness and weight loss will be associated with my being sexual active*"
A 16 year old school girl claimed "*girls face multiple problems: one is the fear and shame to buy, the second is humiliation by provider about why she has become sexually active, the third is refusal from partner if she requests a male method like condom and the fourth is lack of a secret place to hide cp at home and the fear of being found while taking*"
Discussants indicated that most ever non users to be; those who could not win their fear and decide to share their being sexually active in order to get cp, those who are negligent, and those involved in sexual activity when their state of mind was not clear due to the influence of alcohol, khat or other substances.

As to where do adolescents prefers to get cp services? Most discussants agreed that adolescents feel comfortable to be entertained with their peers at the youth center. However this will create another problem that adolescents will be afraid of being identified as

sexually active by everyone if they are seen in the vicinity of the youth centers. While using government health institutions necessitates showing identification card and registration that might create problem in confidentiality. Pharmacies are good but adolescents might not have money to buy cp every time. There were no general agreements as to which centers were the best for adolescents.

Discussants suggested:

Adolescents should be thought and guided about sexuality before the age they are likely to engage in sexual activities. Majority from all group agreed this should be done before the age of 13-14 i.e. before high school for students. Majority also rose that adolescents engage in unprotected sexual activity when their state of mind is not clear because of influence of different substance, and adolescents engage in substances use because of joblessness and lack of recreational places. Thus programs that encourage safe sex should also consider anti substance campaign, income generating activities and preparing recreational place. Furthermore, since adolescents have different needs and face different problems to the use of cp discussants suggested it is better to make cp available for adolescents through different routes. And sensitizing providers to treat adolescents appropriately and also making services affordable, banning the need of showing identification card or registration by name so that adolescents use Government health services where they feel comfortable. Discussants also raised that organizing multi purpose youth club (library, play grounds and different income generating activities) could help in solving economic and recreational problem and as well as minimizing the fear of adolescents to utilize youth centers for cp fear of being identified as sexually active.

VI. Discussions

In our study 95 % of the total study populations (92.1% versus 97.9% of out and in school adolescents respectively) have heard of cp. Of these 81.1% of out of school and 90.8 % of in school adolescents spontaneously named at least one cp. While 99.8% out of school and 99.5% of in school correctly identified at least one cp from the list of items. Of those adolescents who heard about cp 87.1% of out of school and 89% in school adolescents knew where to get cp of which 73.1% in school and 61% out of school spontaneously named at least one source of cp. This study has also indicated that, written material/books, teachers, media and friends were frequently reported sources of information while, the majority of respondents reported they prefers to hear more about cp from health professionals; written material/book, and teachers if they are given choices.

Since knowledge is an important prerequisite in gaining access to cp such a high knowledge of cp level could be promising for better future use. This finding is in agreement with the reports of previous study from Addis Ababa that reported cp knowledge level of adolescents to be 93-98 % (11, 15, 34, 35). However, this finding is higher than reports of studies from other urban centers of the country where cp knowledge level varies from, 54% in Harar (32), to 75-83% in north Gondar (27, 28). This level is also comparable with the level of adolescents' cp knowledge in Asia, near east, North Africa, the Caribbean and Latin America where the level of adolescents' knowledge about cp were above 90% (42).

Though it is difficult to find similar studies to compare our result knowledge about sources of cp were unsatisfactory considering knowledge is an important factor for gaining access. Our study has also indicated that, in school adolescents were more knowledgeable about cp and cp sources than their out of school counterparts. This could be due to the relatively better information exposure and communication network that in school adolescents could have.

Having multiple sources of information about cp might have both positive and negative effects. The positive effect is having multiple sources of information might results in a better chance of being informed. The negative effects are most informants might lack basic knowledge about cp, have different attitude and interest in the adolescents' sexual behavior thus some might add their own ideas and attitudes about cp and therefore might tell conflicting information to adolescents. This is in agreement with our qualitative results. Adolescents' relative preferences to health professional, Medias and teachers as sources of information about cp could be an indication of adolescents' interest to get information from reliable sources. Our findings were similar to our qualitative results and reports from other local studies (15, 28, 29, 32 72.

This study has also revealed that over all 26.5% of respondents were sexually active. Sexually activity was higher among out of school than in school (36.4% versus 16.6%) and among adolescent boys than girls (42.2% versus 28.8% among out of school and 21.9% versus 10.9% among in school). The mean age at the sexual debut was 15.94 (SD 1.74) and 16.51 (SD 1.66) years for in and out of school adolescents respectively. This indicates that out of schools are at a higher risk facing consequences of adolescent sexuality than in

school adolescents. Differences in engagements in sexual activity between male and female could be due to the double standard norm that most Ethiopian society follows regarding the adolescents involvements in premarital sexual activity (that consider premarital sexual activity of male as normal but strictly disapprove female involvements in the same activity). Though wider generalization and direct comparison was difficult because of difference in time and the age range included in other studies, engagement in sexual activity in our study groups is lower than previous report from Addis Ababa which revealed 20-51% % of adolescents were sexually active (15,34,72,73). It was also lower than the level of sexual activity report by studies conducted in other regions of the country, which vary from 30-32% among students of north Ethiopia (27,28), 20-65% of youth from eastern Ethiopia (31,32) 17.5% of students and 49.3% out of school adolescent in Southern Ethiopia (29,30). It was also lower than reports from other African countries where adolescents' sexual activities vary from 33% in Zimbabwe (23), to 59% in Ghana (24) and 52.2% among Kenyan students (25). However if the level is adjusted for age our results are not remarkably different from a recently conducted comparative study among adolescent aged 15-24 in the two selected high-risk (for STIs) areas of Addis Ababa where the level of sexual activity was 18 % versus 46.3% for in and out of school youth respectively (36). The variation encountered among in and out of school adolescents, and among boys and girls in our study is in agreement with other similar local studies (34, 36). The age difference at the sexual initiation in our study (which was lower for in school adolescents than out of school) could be explained by the differences in the mean age of the study participants where in school participants were younger by the mean age of 1.43 years than out of school participants.

In our study 57.5% of sexually active in school adolescents and 61.4% out of school adolescents ever used cp, 38.6% of out of school sexually active adolescents and 42.7% of in school sexually active adolescents used cp during the first sexual intercourse. And 53.4% out of school and 45.8% in school sexually active adolescents used cp during the last intercourse but only 28.6% out of school and 49.3% of in school ever users (over all 17.5% out of school and 28.6% in school) sexually active adolescents confirmed that they consistently used cp during every sexual intercourse. Our study also revealed that 83.9% of in and 87.3% out of school ever users during the first and 90% of in school and 94% of out of school ever users during the last intercourse used modern methods. Condom was used by 72% of in school and 75% of out of school last time users. Shops were the sources of cp for higher proportion of last time users (for 46% in school and 32.9% out of school). Government hospital/health centers were the second frequent sources for 22% out of school and 5.8% in school last time users. Availability in short distance, no need of prescription and no need of registration were first reasons to get cp from selected sources for higher proportions of sexually active last time users. The main purpose of using cp during the last intercourse for 49.3% of out of school and 41.7% of in school last time users was to prevent pregnancy, for 21.1% out of school and 21.6% of in school last time users was to prevent STIs and for 25.7% out of school and 35% of in school last time users was to prevent both pregnancy and STIs.

Such a high level of ever use of cp among sexually active respondents might indicate adolescents tendency to wards protected sex. This finding was higher than previous reports

of a similar studies conducted locally, were the level of ever use of cp vary between 16-34 % (15, 27, 28, 29). It was also higher than the level reports of similar studies from other SSA were the level of ever use of cp vary from 27% in Ghana (24), to 46% in Kenyan high school students (25). However, it is lower than the reports of a recent community based study among adolescents in Nazareth where ever-use of cp was 78%(33).

The fact that the rate of use during the first intercourse was lower than the last intercourse indicates that adolescents were more exposed to the risk of unprotected sex during the first intercourse than the subsequent intercourses. It also could be an indication to give information about protected sex before the age adolescents start to engage in sexual activity. The increase in the level of cp use from the first to the last sexual intercourse is in agreements with the reports of previous similar study (25, 33). This level of use were lower than the local study conducted in Nazareth where cp use during the first and the last intercourse were 38% and 69% respectively (33) and higher than the report from Kenyan study were the level was 25.8% and 29.7% during the first and last intercourse respectively (25). In our study only one in five sexually active adolescents practice cp consistently, this is very low considering majority of the sexual activities were premarital and could expose adolescent to different consequences of unprotected sex including unwanted early pregnancy and STIs. The discrepancy between ever use and consistent use, even first time use and consistent use might reflect the presence of barriers that adolescents face when trying to use cp. Taking in to account that half of the sexually active female adolescents have been pregnant the level of consistent use of cp could be even lower and it is unsatisfactory. This finding is in agreements with the result of our qualitative finding and

study conducted among Kenyan high school students (25). The relative high rate of use of condom indicates that most adolescent users of cp are not only protected from risk of pregnancy but also from STIs fits quite well with the main purposes mentioned for taking cp during the last intercourse. It could also be an indication for adolescents' relative preference for condom. The relative rate of condom use is higher than reports of previous studies, which were 20 % in Butajjra (30) 4.4% female and 15.1% male respondent in a study conducted in 55 urban centers in Ethiopia (70). The fact that majority of last time users used condom during the last intercourse, condoms are available in most shops, shops are available every where and no need of prescription or registration to buy condom from shops could explain why shops were the source for higher proportion of last time cp users. These findings are in agreement with school-based study in Addis Ababa and Koladiba (15, 27) while it is different from another school based study in Gondar (28).

In this study ever users faced various barriers to use cp. Ashamed to buy, lack of knowledge about how to use properly, partner disapproval and fear of side effect was the most commonly reported barriers mentioned by 34.5% versus 32%, 22.9% versus 23%, 17% versus 13.1% and 18.8% versus 6.6 % out and in school ever users respectively) in their respective orders. Ashamed to buy, lack of knowledge and fear of side effects were the three frequently reported reason for ever non use by 35.7% versus 29.6%, 32.7% versus 29.6%, and 23.5% versus 14.8% out and in school sexually active ever non users in their respective orders. The fact that only 3 (1.2%) of ever users used cp with out facing any problem could explain the extent of barriers and why less than half of ever users used cp consistently in addition to the unplanned nature of adolescent sexual activity, and adolescents engagements

in different substance use which might also affect consistent use of cp. This is in agreement with our qualitative finding that indicated adolescents face various barriers both at the level of accessing and using cp. Considering the reasons for non use especially ashamed to bay, fear of side effects could imply that even if adolescents have knowledge and wants to use cp factors like fear of sharing sensitive personal matters where it face social disapproval that might lead to being rejected or humiliated by providers, and fear of facing side effect could challenge adolescents decision to use cp. These findings are in agreement with reports of previous similar studies as a reason for non use (15, 27, 28, and 30) and our qualitative findings.

Moreover out study depicted adolescents aged 15-17 were less likely to ever use cp than those aged 18-19, adolescents who discuss cp with their friends and adolescents who approve use of cp by adolescents were more likely to ever use cp. Since ever use asks lifetime experience, considering the mean age at sexual debut less than 17 and lower level of cp use during the first intercourse younger adolescents had shorter experience. This explains why younger adolescents were less likely to ever use cp and could also imply the need to provide information and guidance at an early age. The associations between ever use of cp and adolescents views and discussion about cp with friends explains the positive influence of adolescents' views and exchange of information with friends though discussions on ever use. It could also indicate the importance of peer in providing information about cp and clearing the negative rumors about cp. It could also imply important role of friends in decision to use cp. These findings are in agreement with reports

of similar local studies that showed knowledge and attitude to wards cp as determinants of ever use of (28, 70).

Consistent use of cp is an important indicator of the level of protection from the consequences of unprotected adolescent sexuality. Thus what determine the consistent use of cp among adolescents could be important issues for health planners and policy makers to identify areas of intervention and design a program that aims to protect sexually active adolescents from consequences of unprotected sex. Our results that discussion of sex related issues with the mother and religious affiliation had shown a negative while knowledge source of cp have positive association with consistent use of cp.

The finding that discussion of sex related issues with the mother showed negative association with consistent use of cp could be opposite to the logical thinking that discussing sex related issues with the mother would help to protect adolescents from consequences of unprotected sex. This could indicate the negative attitudes of mothers to wards cp, it could also imply the fear of mothers that cp encourage permissiveness and promiscuity. It might also be part of the negative attitude of mothers to ward adolescent sexuality. This is in agreement with our qualitative result. The positive association between knowledge of sources and consistent use of cp could indicate the importance providing information about the sources of cp as one of the strategies to improve the currently low levels of consistent use of cp by sexually active adolescents. This is in agreement with the reports of previous study that knowledge is determinants of cp use (28, 70).

Service arrangement planned by public health planners did not resulted in better utilization of preventive services such as cp. Thus involvement of adolescents in identifying which methods they prefer to use, and from which sources they prefers to use will help to provide information bases to design services for better future use. Our finding has indicated. Of those who planed to use cp 89 % out of school and 85% in school respondents planned to use modern methods. Condom was the most preferred method for future use followed by injectable and pills. It is also important to note that more male than female preferred to use condom (50.6% versus 16.3%), while more female than male preferred injectable and pills (31.5% versus 12.2% and 30.2% versus 12.6% respectively) in the future. The relative preferences to condom indicate adolescents' knowledge about it's the double protection (for both pregnancy and STIS). The sex difference in method preference might indicate the possibility of being refused to request male methods from the female side or vise-versa or simply an individual choice difference. This could be helpful for making appropriate method mix available to meet the different needs of adolescents in order to improve the future use rate. However similar studies were difficult to find to compare our result.

Furthermore our result indicated variation in preferred sources of cp for future use, preferred sources for 44.2% out of school and 29.1% in school adolescents was government hospital/health centers, for 12.1% in school and 9% out of school adolescents was youth centers, whereas sizable proportion of adolescents (23.7% of out of school and 30.2% in school adolescents) could not decide which source to use and the rest mentioned different sources. The relative low preference to youth centers in our study could be explained by the low knowledge of adolescent about youth center. It could also imply to fear of being easily

identified as sexually active while using youth centers. The variation in the preferred source is in agreement with the findings of our qualitative results and studies on services preferences for reproductive health problems (15).

Strengths and limitations of the Study

Strengths

The fact that the study included both in and out of school adolescents in their sensitive age, and elicited important information on barriers faced to the use of cp and adolescents' preferences for better future use. It has also depicted the determinants of consistent use of cp that might have implications for intervention to protect adolescents from the consequences of unprotected sex.

Employment of probability sampling technique to select both in and out of school respondents, achievement of high response rate, making house- to-house visit for out of school adolescents to achieve fairly representative samples and triangulation with qualitative findings are also part of the strength.

Limitations

This study touches on sensitive private matters in a setting where the issue under study faces social disapproval. Thus the possibility of under reporting cannot be ruled out.

The study did not include the illiterates out of school; however the effects could be minimal considering very high level of elementary school enrollment rate that was 100% (13) and the adult literacy rate of 90%(71) in Addis Ababa.

VII. Conclusions

1. The level of Knowledge of methods was quite high however; knowledge of adolescents about sources of cp was inadequate.
0. Though majority of adolescent ever users used modern cp and most of ever users used condom, the level of consistent use was very low thus, sexually active adolescents are highly exposed to consequences of unprotected sex. Out of school adolescents are more exposed to unprotected sex than in school adolescents.
0. Majority of adolescents have plan to use cp in the future, choose to use modern methods and most preferred condom and considerable proportions preferred injectable and pill for future use.
0. Great majority of adolescents had positive views toward cp and were interested to know more about it from appropriate sources before the age they likely to start sexual activity. Adolescents felt not properly thought and guided on how to lead their sexual life neither from school nor from their parents.
0. Though sizable proportion of adolescents prefers to use government institutes with adults for fear being identified as sexually active, most of adolescents showed varied preferences to sources of cp for future use. However the majority used providers' well explanations as common criteria to choose their preferred sources. Adolescents also showed preferences to be entertained with their peers in youth centers if it serves multi purposes that reduce stigma attach to it.
0. Adolescents faced a wide range of barriers to the use of cp both at acquisition and use levels

VIII. Recommendations

0. Provision of information about cp should also include the possible sources of cp.
0. Programs promoting safe sexual behavior should be priority area and it should be integrated with other behavioral change intervention, income generating activities and should give due attention to out of school adolescents.
0. Organization of ARH services should consider appropriate method mix for better future cp use and client satisfaction though choices.
0. Adolescents should be given basic knowledge of sexuality and contraception before the age they likely to engage in sexual activities and effective channels of communication should be used to inform and educate adolescents using health professionals including the author, trained teachers, trained peer promoters and Medias.
0. Building on youth friendly services through sensitization of the providers of the existing different service delivery points and enhancing broad functions of youth centers to include recreational, educational, income generating activities in addition to ARH services to reduce fear of adolescents to utilize the centers.
0. Create public awareness (with emphasis on parents, teachers and service providers) to create supportive environment to inform adolescents about sexuality, encourage abstinence and reduce barriers to the use of cp by sexually active adolescents.
0. Further studies should be conducted including youth 20 and above to identify whether they are facing similar barriers to use cp, parents and teachers on their knowledge about and attitude towards adolescents cp use and providers of different delivery points on their knowledge about and attitude to wards adolescent sexuality and cp needs and how they feel about adolescents cp use.

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Annex. I

Questionnaire

General instructions: on this questionnaire there is no need to write the name or the Addresses of the respondent. Therefore, there is no means to identify who filled the questionnaire. Though some of the questions touch personal life and secret, we kindly request you to give the true and right answer. The purpose of this survey is to assessments knowledge, views, practice and the barriers to the use of contraceptive among adolescents in the city of Addis Ababa.

Code no_____

I. Socio-demographic information			Go to
1.01	Sex of respondents	1. Male 2. Female	
1.02	What is your age now? (Based on last birth day)	_____ Years.	
1.03	What is your marital status?	1. Un married 2. Married 3. Divorced 4. Widowed 5. Others Specify----------	
1.04	What is the highest level of education you have achieved? (For Out of school only)	1. Write and Read→ 2. Elementary not completed→ 3. Elementary Complete → 4. High school not completed→ 5. High School Completed → 6. High school+→	Q1.08
1.05	What grade are you? (For in school only)	1. 9th 3. 11th 2. 10th 4. 12th	
1.06	What is the owner ship the school you attend	1. Government→ 2. Private	Q108
1.07	If you are attending private school is it boy only girls only or mixed	1. Mixed 2 boys only 3. Girls only	
1.08	What is your religion?	1. Orthodox 2. Catholic 3. Protestant 4. Muslim 5. Others specify----------	
1.09	How often do you attend religious services	1. Every day 2. At least once in a week 3. At least once in a month	

		4. At least once in a year 5. Never	
1.10	With whom do you (usually) live?	1. With my father and mother 2. With my mother only → 3. With my father only 4. With relatives → 5. With friends→ 6. Alone→ 7. Other Specify----------	Q1.15 Q1.11 Q1.20 Q1.20 Q1.20 Q1.20
1.11	What is the level of your father's education?	1. Illiterate 2. Reads and Writes 3. Completed Elementary 4. Completed Secondary 5. 12 plus 1to2 years training 6. First degree and above 7. Do not know	
1.12	Does your father live in the same house you live	1. Yes 2. No	
1.13	How easy did you find it to talk with your father about any things that are important for you?	1. Very easy 2. Easy 3. Difficult 4. Very difficult 5. Do not see him	
1.14	How often did you discuss sex-related matters with your father?	1. Often 2. Occasionally 3. Never	
1.15	What is the level of your mother's education?	1. Illiterate 2. Reads and Writes 3. Completed Elementary 4. Completed Secondary 5. 12 plus 1to2 years training 6. First degree and above 7. Do not know	
1.16	Does your mother live in the same house you live	1. Yes 2. No→	Q1.20
1.17	How easy did you find it to talk with your mother about any things that are important for you?	1. Very easy 2. Easy 3. Difficult 4. Very difficult 5. Do not see him	

1.18	How often did you discussed sex-related matters with your mother	1. Often 2. Occasionally 3. Never	
1.19	How often did you discuss sex-related matters with (the relative friends and others) you live with?→	1. Often 2. Occasionally 3. Never	Q1.22
1.20	What is your Parents job status	1. Both of my parent work 2. My father only work 3. My mother only work 4. Both parent do not work	
1.21	How do you perceive the economic status of your family?	1. Poor 3. Medium 4. Rich	
1.22	Do you have pocket money?	1. Yes 2. No	
123	Do you work for pay and have income of your own?	1. Yes 2. No	
II. Knowledge of contraceptives			
2.01	Have you heard of modern contraceptives?	1. Yes 2. No→	Q3.01
2.02	Please name all contraceptive methods you know.	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____	
2.03	Which of the following have you heard to be contraceptive methods?	1. Pill 2. Inject able 3. Condom 4. Jell/foam 5. Ampicillin 6. IUD 7. Norplant 8. Chloroquin 9. Female sterilization 10. Male sterilization 11. Natural methods	

		12. Other specify	
2.04.	From whom or where, have you heard the information about contraceptives? More than one answer is possible	1. School teacher 2. Mother 3. Father 4. Brother 5. Sister 6. Friends 7. Health professionals 8. Books/ magazines 9. Other specify _____	
2.05.	Whom or where do you prefer to have information about contraceptives. More than one answer is possible	1. School teacher 2. Mother 3. Father 4. Brother 5. Sister 6. Friends 7. Health professional 8. Books/ magazines 9. Media 10. Other specify _____	
2.06	Do you know where to get contraceptive methods if you want?	1. Yes 2. No→	Q3.01
207	Pease name all contraceptive sources you know. More than one answer is possible	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7 _____	
2.08	Tick source of contraceptives you know. More than one answer is possible	1. Government Health Center 2. Any office 3. Government Hospital 4. Mothers 5. Private hospital/ Clinic 6. NGO Clinic 7. Youth Centers 8. Any open Market 9. Shops 10. Other specify ----------	
III. Attitude Toward Contraceptive Methods			

3.01	Would you like to know more about modern contraceptive methods?	0. Yes 0. No →	Q3.03
3.02	Why you are interested to know more about contraceptive	_____ _____	
3.03	Why you are not interested to know more about contraceptive	_____ _____	
3.04	Do you discuss about modern contraceptive with your friends?	0. Yes 2. No	
3.05	Which of the following best describe your feeling about contraceptives	0. Contraceptives are harmful for health 0. Contraceptives are not very important 0. Contraceptives are not as important as some people says 0. More people should be aware of the importance of contraceptive 0. If two people are having sex and are not ready to have a child it is very important that they use contraceptives 0. Contraceptives are very important 0. Others specify_____	
3.06	Do you approve use of modern contraceptive methods by adolescents?	1. Yes 2. No 3. Others/ specify----------	
3.07	Who do you think should take responsibility to practice modern contraceptive?	0. Female partner 0. Male partner 0. Both partners	
IV. Sexual History			
4.01	Do you have sexual partner	0. Yes 0. No	
4.02	Have you ever had sexual intercourse?	1. Yes 2. No→	Q5.13
4.03	How old were you the first time you had sex?	_____ Year	

4.04	a. Have you ever been pregnant (girls only? b. Have you ever impregnated? (Boys only)	1. Yes 2. No→	Q5.01
4.05	What was the out come of the pregnancy?	1. Currently pregnant 2. Abortion 3. Life birth 4. Life birth & abortion	
V. Contraceptive Use			
5.01	Have you ever used contraceptive methods?	1. Yes 2. No→	Q5.13
5.02	Did you and your partner discussed about contraceptive methods the first time you had sex?	1. Yes 2. No 3. Don not remember	
5.03	Did you or your partner use contraceptive the first time you had sex?	1. Yes 2. No 3. Do not remember	
5.04	What method did you or your partner used the first time you had sex?	1. Condom 2. Pills 3. Injectable 4. Withdrawal 5. Safe period 6. Others / specify _____	
5.05	Have you or your partner used contraceptive method the last time you had sexual intercourse?	1. Yes 2. No →	Q5.13
5.06	What was the method you used?	1. Condom 2. Pill 3. Inject able 4. Spermicidal 5. IUD 6. Calendar /rhythm/ method 7. Other specify ----------	
5.07	Why you used the method you used during the last intercourse?	1. Easy for secret use 2. Easy to get it 3. Cheep to buy 4. I get it for free 5. Have better knowledge about it	

		6. Other specify----------	
5.08	Where did you get the modern contraceptive you used for the last time?	0. Government Hospital 0. Government Health Center 0. Private Clinic 0. NGO Clinic 0. Pharmacy 0. Youth Center 0. Shops 0. Other specify ----------	
5.09	What was the first most important reason why you get the contraceptive method you used from the above place?	0. No Registration 0. Does not need prescription 0. Short waiting time 0. Friendly staff 0. Availability in Short distance 0. Affordable price 0. Free service 0. Other/specify----------	
5.10	What is the second most important reason why you get the contraceptive method you used from the above place?	0. No Registration 2. Does not need prescription 3. Short waiting time 0. Friendly staff 0. Availability in Short distance 0. Affordable price 0. Free service 0. Other/specify----------	
5.11	For what purpose did you used contraceptive methods the last time you had sexual intercourse?	0. Prevent unwanted pregnancy 0. Prevent sexually transmitted diseases 0. For medication 0. Space child birth 0. Other specify	
5.12	Since from the first intercourse how often you or your partner did used contraceptive methods?	0. Always 0. Some times 0. Never	
5.13	Do you, plan to use contraceptive method in the future	1. Yes 2. No →	Q8.02
VI. Choice of contraceptive methods			
6.01	What methods of contraceptive do you prefer for you or your partner to use in the future?	0. Natural methods→ 0. Modern methods 0. Both natural and modern 0. Others specify	Q 801

6.02	If you are given a choice what modern contraceptive methods do you like you or your partner to use?	5. Condom 6. Pills 7. Inject able 8. Spermicidal 9. IUD 10. Other specify----------	
6.03	Why did you choose the method you choose?	1. Easy to use 2. Easy to get 3. Cheep 4. Effective 5. Less side effect 6. Other specify----------	
VII. Preferred Sources of Modern Contraceptives Methods			
7.01	Where do you prefer to get contraceptive methods of your Choice?	1. Government Hospital 2. Government health center 3. Private clinic 4. NGO Clinic 5. Pharmacy 6. Shops 7. Other specify----------	
7.02	What is the most important criteria you use to choose the place you choose More than one answer is possible	1. No Registration 2. Does not need prescription 3. Short waiting time 4. Friendly staff 5. Short distance from my residence 6. Affordable services 7. Free service 8. Have special place for adolescent 9. Give special hour services for adolescents 10. Other/specify----------	
VIII. Barrier to Contraceptive Use			
8.01	Tick all the problems you faced to use contraceptive methods? (For ever user and current users only) More than one answer is possible	1. Lack of knowledge on how to use properly 2. Shortage of money 3. Long waiting at the health institute 4. Disapproval by parent 5. Disapproval by partner	

		6. Lack of information where to get contraceptive 0. Bad health workers attitudes 0. Fear side effect 0. Embracement to buy 0. Others /specify----------	
8.02	Tick all reasons why you did not used modern contraceptive methods.(For ever non-users) More than one answer is possible	0. Lack of knowledge 0. Religious opposition 0. Fear side effect 0. Afraid of being seen by parents 0. Partner disapproval 0. Do not know where to get contraceptive 0. I can't afford to buy 0. Embracement to buy 0. Do not approve use contraceptive by adolescent 0. Fear of bad health workers attitude 0. Fear of being seen by some one who knows me 0. Preferred method not available 0. Preferred source is far 0. Do not have sexual partner 0. I have not yet started sexual intercourse 0. Other/specify----------	

Annex II

Focus Group Guide

Part I: Where do adolescents spend their leisure time and

Probes: what do they do?

Why are they engaged in sexual activity before marriage?

At what age do they starts having sex and why?

How do adolescents of your age perceive adolescents engagement in sexual activity before marriage?

What about your immediate elders?

what about parents and old people?

Method free discussions

Part II: How do you perceive the level of knowledge and use of contraceptive among adolescents?

Probes: From where or whom do adolescent get information about sex?

From where whom adolescents get information about contraceptive and where to get contraceptives?

Method: free discussion

Part III: Do adolescent face problems in Trying to use contraceptives?

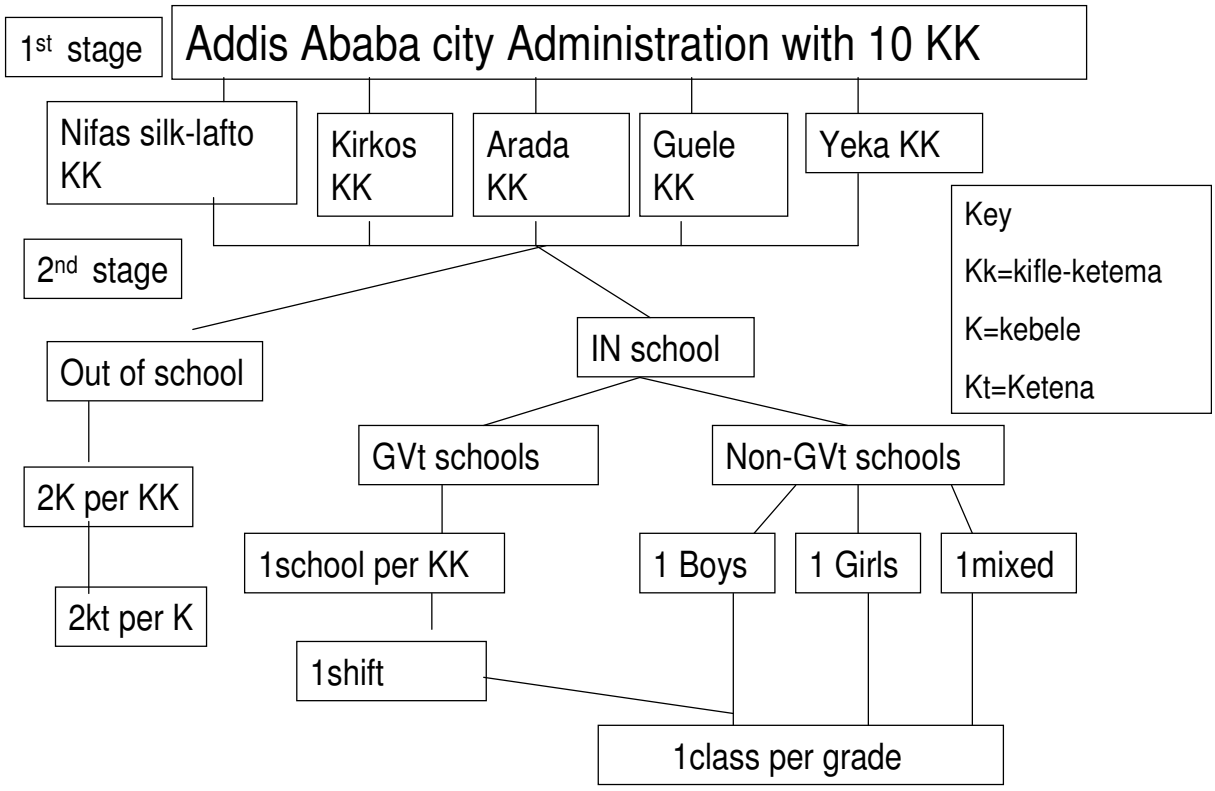
Probes: From where or whom the problem emanates?

Where do adolescents prefer to get contraceptives services?

Method: Free listing and then comparison among groups

Annex III

Schematic presentation of sampling procedure



Annex IV

Map of study area