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**ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**PARENTAL CHARACTERISTICS AND FEMALE  
ADOLESCENTS SEXUAL BEHAVIOR IN ADDIS ABABA:  
THE CASE OF BOLE AND MEDHANIALEM HIGH SCHOOLS**

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A Thesis Submitted to School of Graduate Studies  
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Master of Science in Population Studies

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**By**  
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**July 2007**  
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SCHOOL OF GRADUATE STUDIES**

***Parental Characteristics and Female Adolescents Sexual Behavior in  
Addis Ababa: The Case of Bole and Medhaniealem High Schools***

***By***  
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# TABLE OF CONTENTS

TITLE	Page
ACKNOWLEDGMENT.....	i
TABLE OF CONTENTS .....	ii
LIST OF TABLES .....	iii
LIST OF FIGURES .....	iv
LIST OF ACRONYMS .....	v
ABSTRACT .....	vi
<b>I. INTRODUCTION.....</b>	<b>1</b>
1.1. Statement of the Problem.....	1
1.2. Justification of the Study.....	5
1.3. Objective of the Study .....	6
1.3.1. General objective.....	6
1.3.2. Specific objectives.....	6
1.4. Literature Review	
1.4.1. Female Adolescent Sexual Behavior: The Global Scene .....	7
1.4.2. Female Adolescent Sexual Behavior: The National Scene .....	8
1.4.3. Theoretical Perspectives.....	9
1.4.4. Empirical Findings on Female Adolescent Sexual Behavior.....	11
1.5. Conceptual Framework.....	15
1.6. Hypotheses of the Study.....	17
1.7. Limitation of the Study.....	17

**II. METHODOLOGY**

2.1. Source and Study Population..... 18

2.2. Study design and Source of data..... 18

2.3. Data Collection and Management..... 19

2.4. Sampling Technique..... 19

2.5. Sample Size Determination..... 20

2.6. Data Analysis..... 21

2.7. Description of Variable..... 22

2.8. Operational definitions..... 23

**III. SELECTED BACKGROUND CHARACTERISTICS OF THE RESPONDENTS**

3.1 Socio-Economic and Demographic Characteristics of the Respondents ..... 25

3.2. Sexual Behavior of the Respondents ..... 27

3.3. Parental Characteristics of the Study Population..... 32

**IV. PARENTAL CHARACTERISTICS AND FEMALE ADOLESCENTS SEXUAL BEHAVIOR**

4.1. Bivariate Analysis Results..... 35

4.2. Multivariate Analysis Results..... 42

4.3. Discussion..... 48

## **V. SUMMARY, CONCLUSION AND RECOMMENDATION**

5.1 Summary and conclusion.....	51
5.2 Recommendation.....	53
List of Reference.....	55
Appendix - I.....	59

## List of Tables

Table 1. Proportional sample size.....	20
Table 3.1 Percentage Distribution of Respondents by Socio Economic and Demographic Characteristics, Addis Ababa: 2007.....	26
Table 3.2(a) Respondent's Sexual Experience, Addis Ababa: 2007.....	28
Table 3.2(b) Respondent's Knowledge about HIV/AIDS and STDs, Addis Ababa: 2007.....	30
Table3.2(c) Respondent's Contraceptive Knowledge and use, Addis Ababa: 2007.....	31
Table 3.3 Parental Characteristics of Respondent's, Addis Ababa: 2007.....	33
Table 4.1. Proportion of Respondents who are Sexually Active by Selected Socio-Economic and Demographic Characteristic, Addis Ababa: 2007.....	37
Table 4.2. Proportion of Respondents Who Are Sexually Active by Knowledge about HIV/AIDS and STDs and Contraceptives, Addis Ababa: 2007.....	39
Table 4.3. Proportion of Respondents who are Sexually Active by Parental Characteristic, Addis Ababa: 2007.....	41
Table 4.4. Multivariate Analysis Results of female adolescents' Sexual Behavior, Addis Ababa: 2007.....	45

## **List of Figure**

Fig 1. Analytical Framework for the study of Female Adolescents sexual behavior .....	16
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## **LIST OF ACRONYMS**

AGI	Alan Guumacher Institute
AIDS	Acquired Immune Deficiency Syndrome
ECA	Economic Commission for Africa
HIV	Human Immune Virus
IUD	IntraUterine Device
MOH	Ministry of Health
MOLSA	Ministry of Labor and Social Affairs
NOP	National Office of Population
PATH	Program for Appropriate Technology in Health
SPSS	Statistical Package for Social Scientists
STDs	Sexually Transmitted Diseases
UN	United Nations
UNAIDS	United Nations Program on HIV/AIDS
UNFPA	United Nations Population Fund
WHO	World Health Organization

## **ABSTRACT**

The study tried to examine how parental attributes influence female adolescents' sexual activity. The data was collected from female students in the age group 14-19 years of Bole and Medhanialem high schools in Addis Ababa using cross sectional study. A total sample size was 800 students selected by employing multistage random cluster sampling method. The data was entered and analyzed using SPSS. Descriptive statistic used to describe the respondents' and their parents' characteristics. Binary logistic regression model was used to establish relationship between the female adolescents' sexual behavior and their parents' characteristics.

The study revealed that 12.6 % of the students have reported to start sexual intercourse. Age at first sex reported 55.4% started at middle adolescence (14-15) and the rest 44.6% at late adolescence (16-19). Around 31% of sexually active girls had multi-sexual partners. Greater proportion of the students (76.2%) had involved into sexual intercourse willingly. Among the respondents 727 (90.9%) have better while 73(9.1%) poor knowledge pertaining to HIV/AIDS. Although, 74.0% of the students have sufficient knowledge about contraceptive methods, 62.5% of the sexually active students did not use contraceptive during their first sexual intercourse.

The finding of multivariate analysis point out parental religiosity, mothers' education, parental income and parent adolescent communication about sexual issues have significant influence on adolescents' sexual behavior.

It is concluded that high school students are involving in to risky sexual activities. As they are in the age to be under parent's guidance, parents have the responsibility to instruct their children sexual behavior. Hence it is important to design programs that will empower parents with the skills to shape their children's reproductive health matters would be promoted in the study area.

## **I. INTRODUCTION**

In the world as a whole, it was estimated that the adolescent population in the age 10-19 was 1.2 billion in 2003, the largest generation of adolescents in history (UNFPA, 2003). Adolescence is the transition from childhood to adulthood during the second decade of life (Bongaarts, 1996). Many social, economic, biological, and demographic events occur in this period. These factors also set the base for the stage of adulthood. In other words, the quality of their future life depends on the extent to which adolescents take advantage of all prevailing opportunities. These opportunities are crucial in their future personal growth by empowering their human and financial capital, while avoiding the potential risky outcomes of sexual activities such as dropout from school, unplanned pregnancy, and adverse health effects (Ibid, 1996). In developing countries, however, adolescents especially female adolescents are experiencing adverse consequences of risky sexual activity due to their socio demographic (low level of education, inadequate health facility, early marriage, infrequent attendance of religious services, age etc.) and economic background (poverty).

All stakeholders and especially parents have a primary responsibility of resolving and curbing such problems. In a nutshell, parental characteristics have a clear effect on the future personalities of adolescents. Hence, this paper will examine female adolescents' sexual behavior in relation to their parents' characteristics.

### **1.1. Statement of the Problem**

Adolescence is a period of life that has come to be regarded as a period of intense sexual drive and sexual and drug experimentation (Evelyn and Osafu, 1999). During this age, a number of adolescent are involved in multi-sexual partnerships and premarital sexual activities (Okonofua,

2000). Multi-partnership and premarital sexual activity of adolescents is associated with reproductive health problems, particularly, sexually transmitted diseases (STDs) including HIV/AIDS and unintended pregnancies, which may lead to unsafe abortion (Meekers and Calves, 1999).

Many studies on the sexual behavior of African adolescents (Brabin et al, 1995; Evelyn and Osafu, 1999; and Odimegwa et al, 2002) indicate that they are found to be sexually active and having multiple sexual partners with only negligible proportion using contraceptives. In Benin, a state of Nigeria, for example, 77.7% of female respondents acknowledged being sexually active and 35% of them had multiple sexual partners. Moreover, 73.1% did not use a condom during sexual intercourse, even though 40% were aware of condom use to prevent HIV infection (Evelyn and Osafu, 1999).

Another study conducted on the sexual behavior of female adolescents of different levels of socio economic status in Nigeria also revealed that one third of the female adolescents who were participated in the study had already experienced sexual intercourse (Sunmala, 2003). According to this study, contraceptive knowledge and use varied widely. The level of contraceptive knowledge was between 37% and 63.8% whereas use rate varied between 0.7% and 12.5% (Ibid, 2003).

In Ethiopia, it was only 68.8% of sexually active adolescents had knowledge about contraception and the rest (31.2 %) lacked knowledge about any of the contraception methods (Zemed, 2002). In Addis Ababa, it was found that 24% of the respondents were sexually active and that 70% of sexually active adolescents had their first sexual intercourse between ages 14-16, and claimed having more than one sexual partner (Gebre, 1990 as cited by Mahari, 2005).

Another study conducted in Addis Ababa high schools also reported that 50% of the adolescents who had experienced sex had their first sexual intercourse before the age of 17 and only 18% of the students had used a condom (Fissha, 1994 as cited by Mahari, 2005).

Mehari (2005) found that the mean age of first sexual intercourse of the respondents from Addis Ababa private and government schools was 15 years. And about three fourth of the respondents, initiated sex in the age group of 15 to 19. Among the sexually-active respondents only 39% and 44% used contraceptive methods during their first sexual intercourse and last sexual intercourse, respectively.

Sexual activity of young women had a strong association with reproductive health risks. The risks are more complicated for younger adolescent women than for their counterparts in their twenties due to mental and physical immaturity (UNFPA, 2005).

Reproductive health risks related to pregnancy complication like anemia, hemorrhage, obstructed labor, fistula and eclampsia were greater for young women aged 14-19 than for those older than 20 years (Meekers and Calves, 1999).

Studies in some African countries have shown that maternal mortality among women younger than 16 was nearly six times than that of women aged 20—24 (Harrison and Rossifer, 1985; Lake, 1989 and UN, 1989). World Bank (1989) reports also show that anemia is almost two times more common among adolescent mothers than among older ones. Similarly, in Kenya, 70% of the women who had difficult labor during delivering at a local community hospital were young (Zabin, 1989).

Moreover, the prevailing epidemic of HIV has also been shown to exert its greatest toll among African adolescents (Kamaara, 1999). The incidence of

STD has also always been highest among these adolescents (Brabin et al, 1995).

In shaping the adolescents sexual behavior, Odimegwa et al (2000) gave due emphasis on the role of parents. According to them:

*There is no doubt that parents have an important role to play in upbringing of their children, the effectiveness of parents in discharging this onerous duty could be to a great extent help adolescents delay first intercourse and protect themselves from sexual activity. However if the parents are hindered by factors such as education, income and marital instability, the young child might become a victim of neglect and abuse (Odimegwa et al, 2002:105).*

Mehari (2005) found that in Addis Ababa almost half of the respondents, who had never had sex, had mothers with secondary or higher education. The study also found that there was a strong association between parental income and adolescents' sexual behavior.

In Ethiopia parent-adolescent communication about sexuality is demanding for both the adolescents and their parents due to cultural taboo (Wossen, 2005). Thus adolescents could get wrong information and counseling from peer groups (Ibid).

Adolescents from separated parents are also more likely to entail themselves in early sexual activity (Erickson, 1998). This is attributed to lack of proper monitoring and education of the child.

Many studies (Mehari, 2005 and Wossen, 2005) have been done on Addis Ababa high Schools focused on socio demographic and other background characteristics of adolescents in relation to their sexual behavior. However, most of the studies have not critically examined the nature of the relationship between parental background and adolescent sexual behavior.

Therefore, it is vital to conduct a study that focuses on the association of parental characteristics with adolescents' sexual behavior.

## **1.2. Justification of the Study**

The study of sexual behavior has become a major preoccupation for demographers. This is because risky sexual activity results in reproductive health problems such as unwanted pregnancy and childbirth, and STDs including HIV infection. Moreover, females particularly the younger ones bear greater consequences of unsafe sex (Population Council, 1994). Studies (such as Mehari, 2005 and Wossen, 2005) also indicate that a considerable proportion of female high school students in Addis Ababa are experiencing high-risk.

Anthropological perspectives, adaptation and social disorganization theories have been used to explain the association between female sexual behavior and parental religion, parental income and parental education respectively. Moreover social disorganization theory may explain the relation between female sexual behaviors and family background variables like parent adolescent communication, parental employment status, and living arrangement (Cherlin et al, 1986 and Bohenschneider, 1996).

Based on the above stated theories, the paper established an analytical framework for female sexual behavior in relation to parental characteristics. In light of the framework, data were collected and analyzed to test the applicability of the theories to the sexual behavior high school female adolescents in Addis Ababa.

The study area, Addis Ababa, was selected due to the high level of HIV prevalence among adolescents aged 15-19 years; that is according to the on line Data Base of AIDS Resource Center of Ethiopia about 10,000 girls live with HIV during 2005, the personal interest of the researcher based on

common knowledge of the area and limited recourses (financial and time). Based on the findings of the study, the need to design programs that will empower parents with the skills to shape their children's reproductive health matters would be promoted in the study area. The paper is also expected to be a stepping-stone to critically examine the relationship between parental characteristics and female adolescent sexual behavior for further study.

### **1.3. Objective of the Study**

#### **1.3.1. General objective**

The general objective of this study is to critically investigate the relationship between parental characteristics and female adolescent sexual behavior of high school students in Addis Ababa.

#### **1.3.2. Specific objectives**

- To identify the association between parental characteristics and female adolescents' sexual behavior.
- To look at how parents' living arrangement influence sexual behavior.
- To examine the effect of communication between parents and female adolescents on sexual behavior.

## **1.4 Literature Review**

### **1.4.1. Female Adolescent Sexual Behavior: The Global Scene**

Today, the number of adolescents in the world is increasing than ever before. Among them, a significant number are sexually active and an increasing proportion of sexual activity is occurring outside marriage (PATH, 2004).

Surveys done in Sub-Saharan Africa and Latin America indicate that about 43% and 20% of women aged 20 years have had premarital sex, respectively (Ibid). In some developed countries, the rates are higher; 68% of adolescents in the United State and 72% in France have had premarital sex by age 20 (AGI, 1998).

Regarding the usage of contraceptives among adolescents aged 15-19, the proportions are very low in some of the sub Sahara African countries like Nigeria (1%), Niger (2%), Sudan (4%), Tanzania and Togo (5%). While the percentages are above 10% in Botswana, Cameroon, Egypt, Kenya, Morocco, Namibia and Zimbabwe (UN, ECA, 1994). The common reason for the low rate of contraceptive usage is a limited knowledge of contraception methods (PATH, 2004). As a consequence, the sexually active adolescents face the risk of early childbearing, unsafe abortion and sexually-transmitted disease (STDs) including HIV infection (Ibid).

Studies reveal that women in the developing countries give birth at an earlier age than those in developed countries. In the developing countries 40% of women give birth below the age of 20 on average, ranging from a low of 8% in East Asia to a high of 56% in West Africa. Whereas in many developed regions, only 10% of adolescents begin childbearing early (Noble et. al., 1996). Moreover, each year, 1 million to 4.4 million adolescents in developing countries undergo abortion and most of these procedures are

performed under unsafe conditions (Ibid). In Sub-Saharan Africa and the Caribbean, female adolescents are three times more likely than male adolescents to be HIV positive (UNFPA, 2005).

The risky sexual behaviors may result from different reasons. According to Bogenschneider (1996), family risky factors are the most influential for sexual behaviors of female adolescents. It includes like single parent or disrupted family, permissive parental values regarding adolescent sexual behavior, poor parental monitoring, lack of family support and closeness, poor parent-adolescent communication on sexual affairs, low parental education and being from low income families (Ibid).

#### **1.4.2. Female Adolescent Sexual Behavior: The National Scene**

In Ethiopia there is a strong cultural barrier regarding parent-child discussion about sexuality. Furthermore, most parents lack the necessary knowledge to be addressed to adolescents about sexual matters. As a result, adolescents do not acquire adequate knowledge on sexual issues and its consequences from their parents. In the absence of such communication between parent and children, there is a high likelihood that the majority of young people often get distorted information from peers and in recent years from movies (NOP, 1999).

In 1996-1997 in Zeway, a study was conducted targeting 246 mothers and fathers who had children aged 10-24 years. The result indicated that parents do not have satisfactory knowledge on reproductive health issues. Among all the highest proportion of parents, only 20% have reported they had communication about sex with their children sometime in the past (Taffa et al, 1999). This indicates that the adolescents lack appropriate and reliable information regarding safe sex from their parents.

In Bahir Dar, for example, of the 44% respondents, who reported to have had sexual intercourse, only 17% reported using any contraceptives at first intercourse (Mulugeta, 2003). Among the mechanisms used by some girls to prevent pregnancy are using roots, leaves and abortion (Ibid). These harmful methods are available from herbalists in the villages (Ibid). Among adolescent students in Addis Ababa who acknowledged to have had sex, their contraceptive usage is also very low. This implies that the exposure for STIs and HIV/AIDS is very serious among the adolescent students (Mehari, 2005).

### **1.4.3. Theoretical Perspectives**

This section reviews major theoretical perspectives on female sexual behavior, which can serve as an initial step to develop the relationship between parental characteristics and female adolescents' sexual behavior.

The theoretical approaches can be divided in to three broad categories: -

- (1) Anthropological perspective: Moral self control hypothesis.
- (2) Rational adaptation or economic hypothesis.
- (3) Social disorganization theory.

#### **(1) Anthropological perspective: Moral Self Control hypothesis**

The core element in moral self control hypothesis is the association between religion and sexual behavior. According to the theory morality and theological doctrine dictate restrictive sexual behavior. As a result, with the help of the male, female purity is maintained and considered as a noblest aspect of religious afflation and social life (Woodroof, 1985). According to Woodroof, adolescents whose parents attend church regularly were correlated with lower levels of sexual intercourse behavior.

However, contrary to this theory, Caldwell and Quiggin believe that sexual behavior is neither placed at the center of moral and social systems nor

given some holy status for female adolescents (Caldwell and Quiggin, 1989). Despite the stated idea by Caldwell and Quiggin, studies still show the existence of a positive association between restrictive sexual norms and religious affiliations or religiosity.

## **(2) Rational Adaptation/Economic Hypothesis**

Advocates of the rational adaptation hypothesis argue that early sexual initiation of female adolescents for economic reason is rational. Accordingly, sexual activity of adolescents has a negative relation with adolescent's income. Current sexual activity is, therefore, aggravated because young women consider it as source of income to support their day to day demand (Baker and Rich, 1992 and Weiss, 1993). According to Baker and Rich, poverty is the cause of early sexual initiation and they put as evidence the increasing prevalence of the "Sugar daddy" phenomenon in Africa (Baker and Rich 1992). On the other hand, some scholars (such as Djamba, 1997) argue that female adolescents do not enter into sexual relations merely as the result of poverty.

Generally, rational adaptation is a plausible hypothesis because parents who are low-income earners may not have the ability to provide their young adolescents with all their needs. Thus adolescents may be exposed to sexual exploitation by older members of the society.

## **(3) Social Disorganization Theory**

Social disorganization theory is derived from control theory. The main assumption of the theory is that modern factors such as the loosening of traditional social controls are associated with the adoption of a western lifestyle, which leads to early sexual involvement by removing adolescents from parental supervision. Parents, therefore, are incapable to guide and

control their children in accordance with the traditional social setting. The powerlessness of the parents is aggravated if they have low education, not in an intact family, and have poor communication with their children (Cherlin et al, 1986 and Bohenschreider, 1996). Thus, it is argued that the current level of female adolescents' sexual activity in Africa has resulted from the breakdown of social control (Djamba, 1997).

Ensmiger (1990) also proved this theory in her study on sexual activity and problem behaviors among black urban adolescents. The study shows that one fourth of the respondents who were involved in premarital sexual activity acknowledged that they gained information about sexuality from movies and never had communication about sex with their parents.

To the contrary, opponents of the theory argue that most assumptions of social disorganization theory are derived from parents or adults' report about young women's sexual behavior. Such reports may differ from young women's own description of the cause of sexual initiation (Djamba, 1997).

But if this hypothesis is tested properly by including the young women's own description of the cause, it may yield useful information that explains the parental characteristics and female sexual activity relationship.

#### **1.4.4. Empirical Findings on Female Adolescent Sexual Behavior**

Female adolescent's sexual behavior is influenced by parental religion, income, education, living arrangement and parent-child communication. These are described by various studies as follows.

**Parental religion:** - Most African parents use religion as a basic tool to discourage premarital sexual relations. According to some studies, adolescents with religious parents are less likely to have had an early sexual intercourse (Erickson, 1998).

The significant effect of religion on premarital sexual behavior was further studied by comparing parents that held a leadership position in the local church and those who do not. The study revealed that one third of the respondents whose fathers held a leadership position in the local church were less sexually active than those respondents whose fathers did not hold a leadership position in the church (Woodroof, 1985).

TewoldeBirhan (1996) conducted a study on sexual behavior of adolescent in Awassa, Ethiopia. The study found that family's religion has exerted a substantial impact on the young women to have premarital sexual intercourse that causes unplanned pregnancy.

**Parental Income:** - Erickson (1998) and Bogenschneider (1996) generalized that adolescents from families with lower income had sex four to six months earlier than those from higher income families. Similarly in Nigeria, adolescents who reported to have low parental income were more sexually active than those who reported to have high or medium parental income (Odimegmu et al, 2002).

Study conducted in Awassa, indicates that parental income has an indirect relation with the risk of premarital pregnancy; that is, when the income of parents increased premarital sexual activity of young women decreased (TweldeBerhan, 1996).

**Parental Education:** - Teenagers who have educated parents tend to delay their first intercourse. Even if sexual activity happens; there is a high probability that steps would be taken to reduce the risk of pregnancy by educating adolescents about safe sex (Bogenschneider, 1996).

A study showed that the highest level of sexual activity was seen among young females whose mothers had attained only primary education.

However, having a mother who had completed high school, cut by half the chance that a daughter would have a baby before marriage (Haveman and Wolf, 1991 as cited by Bogenschneider). This finding was also confirmed in a research by Berhanu (1998) in Bahir Dar, where adolescents with low educated mothers had higher likelihood of being engaged into premarital sexual activity than those from high-educated parents. The risk was estimated to be about five times higher in the former than in the latter.

**Living Arrangement:** - studies show that young adolescents from intact families are consistently less likely to report sexual intercourse (Flewelling, 1990, Ensumigyer 1990, Sunmola et al, 2003 and Schereck, 1999). According to Bogenschneider (1996) unmarried daughters of single parents were three times more likely to have a child than unmarried girls living in stable families. A number of studies conducted in Ethiopia have also supported the negative relationship between coming from an intact family and the risk of involvement in sexual intercourse. For example, Berhanu (1998) found that premarital sexual activity was 1.7 times higher among adolescents from non-intact families as compared to those living with both biological parents.

**Parent-child communication:** - Family communication is a powerful predictor of teen's sexual behavior. Good communication delays sexual debut and promotes the use of contraceptives, especially among daughters (Holtzman and Rubinson, 1995).

Studies conducted in two districts of Nigeria ;namely, Niger and Benin shows that adolescents with whom parents had discussed family life issues were less likely to be sexually active (Evenly and Osafu, 1999 and Odimegwa et al, 2002). In Benin, out of 723 total sample size, only 84 adolescents discussed with their parents about sex (Sunmola et al, 2003). Another study that attempted to assess parent-child communication was

undertaken in Lesotho in 2003. A total 30 focus group (15 with mothers and 15 with fathers) were included in the study. The majority of participants reported that although they are aware of sexual relationships among adolescents, they never discussed sexual issues with them (Mturi, 2003). Similarly a study conducted in Cameroon has shown only 26.5% of 1,600 adolescents had discussed sexual issues or contraception matters with parents (Meekers and Calves 1999).

Studies in Ethiopia had similar results like that of other African countries. The studies indicate that those adolescents who mostly discussed with their parents were not involved in sexual practices as compared to their counterparts who did not (Tessema, 2003).

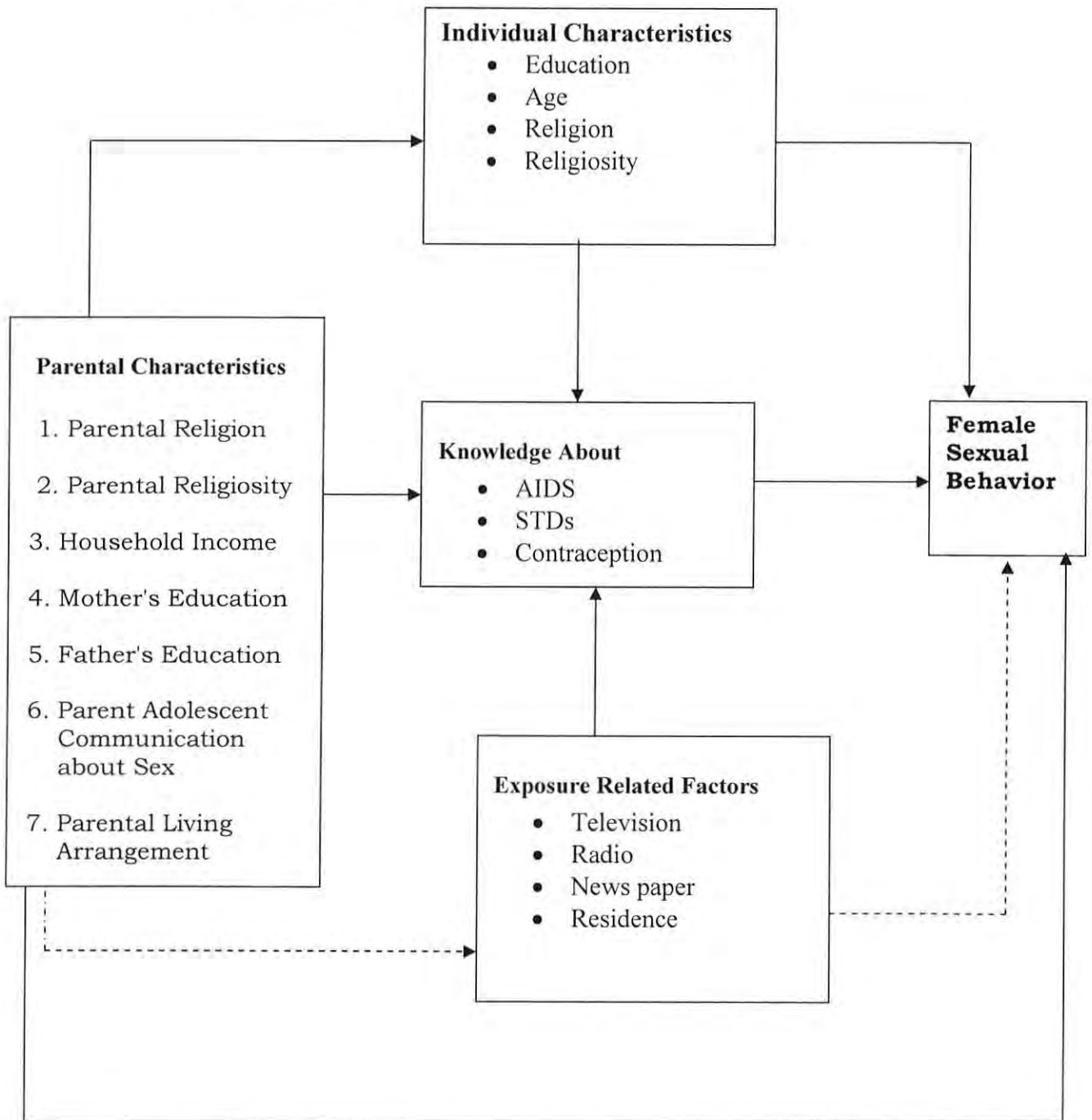
Based on the above assessed theoretical and empirical findings, this paper attempted to examine the relationship between parental characteristics and female adolescent sexual behavior of the two high school students in Addis Ababa.

#### **1.4.5. Conceptual Framework**

Djamba (1997) constructed a conceptual framework based on the aforementioned theoretical perspectives. Beyond the direct relationship between parental characteristics and adolescents sexual behavior the framework explains the relationship by taking into account personal characteristics, exposure related factors, knowledge about AIDS and contraception in determining adolescents sexual behavior.

In this study, efforts are, however, made to investigate the direct influence of parental characteristics and their influence through shaping personal characteristics, knowledge about AIDS and contraception as well as contraceptive use on female sexual behavior. Thus, to organize our knowledge systematically and to see how concepts are related to one another, the author adopted the following analytical framework on the basis of the work of Djamba (1997)

**Fig 1. Analytical Framework for the study of Female Adolescents Sexual Behavior**



**Legend:** —————> path to be analyzed in this study  
 - - - - -> Path not analyzed in this study

**Adopted from:** Djamba (1997)

#### **1.4.6. Hypotheses of the Study**

Based on the review of literature and objective of the study, the following hypotheses are set for farther investigations.

1. The initiation of sexual activity is negatively associated with parental income.
2. The sexual activity of female adolescents has a negative relation with parent's education specifically mother's educational level.
3. Adolescents with intact parents are less likely to be involved in early sexual intercourse.
4. Adolescents with whom parents had discussed family life issues have less likely to be sexually active.

#### **1.4.7. Limitation of the Study**

The study was conducted based on a self administered questionnaire due to the highly sensitivity of investigation sexual behavior. As a result, the study is subject to all strengths and weaknesses of self-administered questionnaires. The advantages of a self-administered questionnaire are economy, speed, lack of interviewer bias, and the possibility of anonymity and privacy to encourage candid responses on sensitive issues. On the contrary it is subject to more incomplete questionnaires and more misunderstood questions, generally lower return rates, and greater inflexibility in terms of sampling and special observations as compared to questionnaire based on interview.

## **II. METHODOLOG**

### **2.1 Source and Study Population**

The study population comprised female adolescents aged 14-19 years. They were selected from two different high schools in Addis Ababa: Bole and Medhanialem. The schools were randomly picked from Gulelie and Bole sub cities which were included in the study by selecting randomly from the ten sub cities of Addis Ababa.

### **2.2 Study design and Source of data**

The study was a cross sectional survey. It was based on primary data collection on sexual behaviors of female adolescents in the age group of 14-19 and their parents' characteristics: Bole and Medhanialem female high school students in Addis Ababa.

The instrument employed for data collection was a structured questionnaire. The questionnaire incorporated information on the background of the respondent, sexual behavior such as whether they have ever had sex, number of sexual partners, knowledge about HIV/AIDS and its prevention methods as well as knowledge and use of contraceptive methods. Further, it included background information on the adolescents' parents like religion, religiosity, income, occupation, education, living arrangement and parent child communication.

This questionnaire, which was initially developed in English, was translated into Amharic for the respondents' easy understanding. It was also pre-tested to ensure its accuracy and flexibility and then modified accordingly.

### **2.3. Data Collection and Management**

The data were collected through self-administered questionnaire. This is because the subject matter is highly sensitive and discussion about sex in Ethiopia is not easy. As a result, the questionnaire was distributed to the students to be completed by themselves. The questions were self explanatory. The research objective was explained to students by the researcher. On the time schedule premeditated in association with the schools unit leaders, the respondents congregated in different classrooms to fill the questionnaire privately.

To check the completeness and relevance of the collected data, every response of each questionnaire were reviewed by the principal investigator.

### **2.4. Sampling Technique**

The sampling technique of the study was a multi-stage random sampling technique. In the first stage two sub cities namely; Bole and Gulelie, were randomly selected from the ten sub cities of Addis Ababa. Then Medhanialem and Bole high schools which had the highest number of students in the selected sub cities were selected purposefully. A sample size of 806 female students aged 14-19 was assigned according to the proportional size of each schools. Then the sample size of each selected school distributed equally to each grade 9-12. Sections in each grade were selected randomly on the basis of probability proportional to their size. Finally systematic random sampling was used to select the respondents with a sampling interval of four, list of the students was sampling frame.

**Table 1. Proportional sample size**

Name of the schools	Number of female students aged 14-19 (N)	Percentage of eligible respondents (%)	Sample size (n)
Medhanialem	3894	57.2	461
Bole	2913	42.8	345
Total	6807	100	806

## 2.5. Sample Size Determination

The sample size of the study was determined using the following formula and assumptions:

1. Proportion of the population possessing major attribute (sexually initiated adolescents) is assumed to be 50% as the researcher does not have information regarding the extent of the problem.
2. The level of confidence is 95%.
3. Limit of accuracy is 5% so as to estimate the proportion of adolescents who have initiated sex (p) with the error to be tolerated as low as possible.
4. Contingency is 5%
5. Design effect = 2

$$\text{Sample Size (n)} = \frac{P.C (100-P.C) Z^2}{E^2}$$

Where P.C=the proportion of female adolescents who have involved in risky sexual behavior; that is ,assumed to be 50%

Z=1.96 critical value for a 95% confidence interval in a normal probability table.

E=the margin of error or limit of accuracy, which the researcher tolerated ;that is,5%.

Therefore, the required sample size obtained as:

$$\begin{aligned} n &= (0.5*(1-0.5)*1.96^2)\0.05^2 \\ &= 384 \end{aligned}$$

Since multi stage sampling was applied, to correct the design effect; we multiplied the value of n by 2. The total sample size will be  $2 \times 384 = 768$  and assuming 5% contingency for non-response, the ultimate total sample size taken would be 806.

## 2.6. Data Analysis

Statistical Package for Social Scientists (SPSS) Computer software was used for data entry and analysis. Data cleaning was executed by scrutinizing frequencies and cross tabulations to check accuracy, outliers, consistencies and missing values. Accordingly, incorrect entries were identified and reentered.

The data were analyzed using univariate, bivariate and multivariate techniques. Univariate analysis helps us to describe the profile of respondents and parental characteristics while bivariate analysis is applied to explore the relationship between adolescents' sexual behavior and parental attributes such as religion, religiosity, education, income, cohabitation and parent child-communication about sex. The effect of parental characteristics on the adolescents' sexual activity is analyzed using multivariate analysis technique, specifically the logistic regression model.

Logistic regression modelling is applied when the dependent variable is dichotomous. The results of the model can be expressed as odds ratio; that is  $P_{(X)} / (1 - P_{(X)})$ , where  $P_{(X)}$  is the probability that event X occurs while  $1 - P_{(X)}$  is the probability that event X does not occur. (Y H Chan, 2004).

And the corresponding multiplicative model for the odds is

$$(P / 1 - p) = \exp (\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)$$

Where  $\beta_i$  = regression coefficients,  $i=1, 2, \dots, n$

$X_i$  = set of independent variables;

$P$ =the probability of female adolescents to engage in sexual intercourse;

$1-P$ = the probability of female adolescents not to engage in sexual intercourse;

## 2.7. Description of Variable

**Dependent variable:** - the dependent variable is sexual behavior of female adolescents measured by asking respondents if they ever had sex. The age category between 14 and 19 is used to identifying eligible adolescents for this study. This is because usually age 14 is the beginning of menstrual cycle and this is supposed to make girls realize themselves that they are capable to perform sex. In addition, it is the age category in which most of the girls stay in school to acquire secondary level education under the support and guidance of their family.

**Independent variables:** - independent variables that were included in the study were parental and personal characteristics. The former included:

- Parental Religion- Orthodox , Muslim, Catholic , Protestant
- Parental Religiosity- At least once per week, Occasionally, Never attend (Reference Category)
- Household Income- Less than Birr 500 per month (Reference Category) , Birr 501-1000 per month, Greater than Birr 1000 per month
- Mother's Education-Illiterate (Reference Category), Primary (1-8), Secondary(9-12), Above Secondary
- Father's Education-Illiterate, Primary (1-8), Secondary(9-12), Above Secondary
- Parent Adolescent Communication About Sexual Matters – Yes, No (Reference Category)

- Living Arrangement- Intact parents, Non intact parents (Reference Category)

Personal Characteristics that were included in the study are respondent's socio economic and demographic characteristics

- Age- 14-16, 17-19 (Reference Category)
- Ethnicity- Amhara, Gurage, Oromo ,Tigraway
- Religion- Orthodox, Muslim, Protestant, Catholic
- Religious Attendance-At least once per week, Occasionally, Never attend (Reference Category)
- Highest Grade Attended- (9-10) Grade,(11-12) Grade
- Childhood Place of Residence- Addis Ababa ,Other Urban ,Rural
- Currently Employed- Employed, Not Employed (Reference Category)

**Intermediate variables:** - intermediate variables that were included in the study were knowledge about HIV/AIDS, STDs and contraception.

- Knowledge about HIV/AIDS - Better, Poor
- Knowledge about STDs other than AIDS- Yes, No
- Knowledge about contraceptives- Yes, No (Reference Category)

## 2.8. Operational definitions

Sexual Behavior -	is defined as whether the adolescents start sexual intercourse or not.
Sexual activity-	refers to involvement in sexual intercourse.
Sexual initiation-	refers to the commencement of sexual intercourse.
Sexuality-	sexuality includes the sexual knowledge, beliefs attitudes, values, and behavior of adolescents.

Knowledge-	Awareness of adolescents on the contraception or HIV/AIDS including STDs.
Religiosity –	the frequency of attending religious institutions particularly churches or Mosques.
Occasional attendance-	is attending religious services at most once per month.
Knowledge about HIV/AIDS-	Those adolescents who report knowing over 75% of modes of HIV/AIDS transmission were categorized as having better knowledge while those who report below 75% of modes of HIV/AIDS transmission were classified as having poor knowledge.

### **III. SELECTED BACKGROUND CHARACTERISTICS OF THE RESPONDENTS**

This chapter describes some selected background characteristics of the respondents. The respondents were 9-12<sup>th</sup> grade female students from two High Schools in Addis Ababa; namely, Medhanialem and Bole High Schools. In the study, 806 students were participated though six respondents were excluded form the analysis due to incompleteness and inconsistencies of the responses. The final analysis was, thus, made on the basis of 800 completed questionnaires at a response rate of 99.3%.

#### **3.1 Socio-Economic and Demographic Characteristics of the Respondents**

The respondents' age was categorized into two age groups: 14-16 years (middle adolescence) and 17-19 years age group (late adolescence). As indicated in Table 3.1, the majority of the students (496 (61.5%)) were in the age group of late adolescence while the remaining 308 (38.5%) were categorized in the age group of middle adolescence. The mean age of the respondents was 16.9 years with standard deviation of 1.0.

The distribution of the students by ethnicity showed that 356 (44.9%) were Amhara, 207 (25.9%) were Gurage, 168 (21.0%) were Oromo and 66 (8.2%) were from other ethnic groups including Tigraway. Regarding religion consideration, considerable number of the respondents [544 (68%)] reported Orthodox Christian, 138 (17.3%) Muslim, 74 (9.2%) Protestant, and the remaining 44 (5.5%) reported as others including Catholic religion affiliation. The students were asked to report how frequently they attend religious services. At the time of the survey, and 481 (60.1%) of them responded that they attend religious services at least once a week, 178

(22.3) occasionally whereas 141 (17.6%) never attended such services in their life time.

According to the data collected, 308(38.5%) were attending 9<sup>th</sup>-10<sup>th</sup> grade and 492(61.5%) of the students were in the 11<sup>th</sup>-12<sup>th</sup> grades. Places of residence during childhood were also reported as 687(75.2%) respondents lived in Addis Ababa, 90(14.8%) in other urban areas while 23(10.0%) in rural area.

**Table 3.1 Percentage Distribution of Respondents by Socio Economic and Demographic Characteristics, Addis Ababa: 2007**

Characteristics	Number	Percent (%)
<b>Age (N=800)</b>		
14-16	308	38.5
17-19	492	61.5
<b>Ethnicity (N=800)</b>		
Amhara	359	44.9
Gurage	207	25.9
Oromo	168	21.0
Others*	66	8.2
<b>Religion (N=800)</b>		
Orthodox	544	68.0
Muslim	138	17.3
Protestant	74	9.2
Others**	44	5.5
<b>Religious Attendance (N=800)</b>		
At least once per week	481	60.1
Occasionally	178	22.3
Never attend	141	17.6
<b>Currently Employed (N=800)</b>		
Employed	173	21.6
Not Employed	627	78.4
<b>Higher Grade Attend</b>		
(9-10) Grade	308	38.5
(11-12) Grade	492	61.5
<b>Childhood place of Residence (N=800)</b>		
Addis Ababa	687	75.2
Other Urban	90	14.8
Rural	23	10.0

\* It includes Tigraway, Siltie and Welayta

\*\* It includes Catholic and Traditional

## **3.2. Sexual Behavior of the Respondents**

### **3.2.1. Sexual Experience**

In the study it is found out that 101(12.6%) of the school female adolescents had experienced sexual intercourse. The proportion of the sexually active students is relatively higher compared to the study of Mehari in 2005, which found that 6% of high school students in Addis Ababa had started sexual intercourse (Mehari, 2005).

The data also show (Table 3.2. (a)) that among the students who ever had sex 12 (11.9%) started sex at age less than 14 years, 56(55.4%) initiated sex while they were between 14 to 16 years age group while 33(32.7%) initiated sex at the age of 17 to 19. The median age of the students at first sexual intercourse using a life table approach\* was 17 years while the mean was found to be 16.8 years with standard deviation of 1.4. With regard to sexual partner, the majority [73(72.3%)] students reported that they had their first sexual intercourse willingly with their boy friend, 11(10.9%) reported that they had sex with others while the remaining 4(4%) were forced to have sex (See Table3.2 (a)).

As revealed in Table 3.2(a) 29(28.7%) students stated that the age of the first sexual partner was below 20 while 54(53.5%), 12 (11.9%) and 6 (5.9%) respondents declared as 21-30, 31-40 and greater than 40 years respectively. The mean age of the first sexual partners was 26 years with a standard deviation of 7. This shows that the mean age of sexual partners was 11 years higher than the mean age at which adolescent girls started sex. It is also found that about 31(30.7%) of the girls had experienced sex with more than one partner to date. The number of lifetime partners ranged from one to four.

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\* A life table approach was used to avoid a bias that could be introduced as a result of including only those who had initiated sex by the time of the survey.

The girls who had had sexual experience were also asked why they were involved in sexual practices. A good number of the students 79(78.2%) acknowledge they had engaged in sexual activities to strengthen relationship with boy friends, 17(16.8%) for economic reason, 6(5.9%) because their friends were doing it, and 4(3.9%) because they were raped (See Table 3.2(a)).

During the survey, the students were also asked to report the source(s) of information about sexual matters. Accordingly, greater number of the students (435(54.4%)) stated friends, 213(26.6%) mother, 181 (22.6%) teachers, 117(14.6%) father, 114 (14.3%) school clubs, 105(13.1%) relatives and 90(11.3%)media.

**Table 3.2(a) Respondent's Sexual Experience, Addis Ababa: 2007**

Characteristics	Number	Percent (%)
<b>Sexual Experience (N=800)</b>		
Ever had	101	12.6
Never had	699	87.4
<b>Age at first sex (N=101)</b>		
<14	12	11.9
14-16	56	55.4
17-19	33	32.7
<b>Sexual Partner (N=101)</b>		
Boy friend	73	72.3
Rape	4	3.9
Others	11	10.9
No response	13	12.9
<b>Age of sexual partner (N=101)</b>		
<20	29	28.7
21-30	54	53.5
31-40	12	11.9
>40	6	5.9
<b>Number of Life Time sexual partners (N=101)</b>		
one	70	69.3
Two	21	20.8
three	6	5.9
Four	4	4.0
<b>Reasons for involving in to sexual intercourse (N=101)*</b>		
To strength relationship with boy friend	79	78.2
Raped	4	3.9

Table 3.2(a).....cont'd

To get money	17	16.8
Friends doing it	6	5.9
<b>Source(s) of information about sexual matters (N=800)*</b>		
Father	117	14.6
Mother	213	26.6
Teachers	181	22.6
School Clubs	114	14.3
Friends	435	54.4
Media(audio and printed )	90	11.3

\* Multiple responses

### 3.2.2. Knowledge of HIV /AIDS and STDs

Concerning respondents' understanding about safe sex, the majority of the respondents (596 (74.5%)) reported abstinence as safe sex, while 324(40.5%) reported staying faithful to one's partner and 175 (21.9%), a asking partner to be tested for HIV/AIDS as the best way of having safe sex (Table 3.2. (b)). Almost all of the respondents 727 (90.9%) had 'good' knowledge pertaining to HIV/AIDS. Those having poor knowledge were limited only to 73(9.1%). However, among the sexually active students only 397(67.1%) use condom as a contraceptive. This implies that about 43 % subjected to STDs including HIV/AIDS.

With regard to STDs 646(80.8%) of the girls were familiar with at least one type of STDs. As indicated in Table 3.2. (b), 737(92%) be acquainted with gonorrhoea, 734(91.7%), 324(40.5%) and 81(10.1%) with syphilis, Chlamydia and vaginitis, respectively.

**Table 3.2(b) Respondent's Knowledge about HIV/AIDS and STDs,  
Addis Ababa: 2007**

Characteristics	Number	Percent (%)
<b>Understanding about safe sex (N=800)*</b>		
Abstinence	596	74.5
Avoid using sharp materials in common	341	42.6
Stay faithful to partner	324	40.5
Asking partner to be tested	175	21.9
Avoid casual sex	115	14.4
Condom use	68	8.5
Avoiding sex with those who have more than one sexual partner	48	6.0
Avoid kissing	34	4.3
Others	13	1.6
Avoid mosquito bites	9	1.1
Better	727	90.9
Poor	73	9.1
<b>Knowledge about STDs other than AIDS(N=800)</b>		
Yes	646	80.8
No	154	19.3
<b>Type of STDs known(N=800)*</b>		
Gonorrhoea	737	92.0
Syphilis	734	91.7
Chlamydia	324	40.5
Vaginitis	81	10.1
None	154	19.3

\* Multiple responses

### 3.2.3. Contraceptive Knowledge and Use

The study found out that 592(74%) of the students have knowledge about contraceptives. The types of contraceptives known by the students are Condom 397(67.1%), Oral Pills 378(63.9%), safe period 317(53.5%), Norplant 169 (28.5%), IUD 94(15.9%), withdrawal 8(1.4%) and others 22(3.7%). Refer to Table 3.2(c) in the text.

Out of the total students who admitted to having initiated sexual intercourse, only 36(37.5%) use a contraceptive at the first sexual intercourse. The method of contraception used were condom 22(61.1%), pills 12 (33.3), and the safe period 2(5.6%). The study also found out that,

26(72.2%) of the contraceptive users use contraceptives at every sexual intercourse while 4(11.1%) use some times and 6(16.7%) use only once.

The sexually active non-users of contraceptive were asked the reason for not using contraceptives. Accordingly, 16(24.6%) of the students responded that they never thought about it, while 9(13.8%) of the respondents indicated that they were not allowed to use contraceptives by their sexual partners. Another 9(13.8%) of the respondents were also quoted as saying that the condition did not allow them to do so, while 6(9.2%) do not use contraceptive because they had the perception that it decrease satisfaction and the remaining 2(3.1%) reported being embarrassed to buy it.

**Table3.2(c) Respondent's Contraceptive Knowledge and use, Addis Ababa: 2007**

Characteristics	Number	Percent (%)
<b>Knowledge about contraceptives (N=800)</b>		
Yes	592	74
No	208	26
<b>Type of Contraceptive known (N=592)*</b>		
Condom	397	67.1
Oral Pills	378	63.9
Safe Period	317	53.5
Norplant	169	28.5
IUD	94	15.9
Others	22	3.7
Withdrawal	8	1.4
<b>Did you use Contraceptive during first sexual intercourse (N=101)</b>		
Yes	36	35.6
No	65	64.4
<b>Type of Contraceptive used during first sex (N=36)</b>		
Condom	22	61.1
Pills	12	33.3
Safe period	2	5.6
<b>Reasons for not using Contraceptive during first sex (N=65)*</b>		
Did not think of it	16	24.6
My partner did not want me to use	9	13.8
The condition did not permit	9	13.8
It diminishes pleasure	6	9.2
It is embarrassing to buy	2	3.1

Table 3.2(c).....cont'd

<b>How often do you use contraceptive (N=36)</b>		
At every sexual intercourse	26	72.2
Sometimes	4	11.1
Only once	6	16.7

\* Multiple responses

### 3.3. Parental Characteristics of the Study Population

Table 3.3 indicates that the respondents' parents were mainly Orthodox Christians [570 (71.3)] followed by Muslims 139 (17.4%), Protestants 62 (7.8%) and Catholics 29 (3.6%). The data showed that 459 (57.4%) of the respondents' parents attended religious services daily, 274 (34%) occasionally, while the remaining 67 (8.4%) never attended religious services.

Data on mothers' education, on the other hand, revealed that 228 (28.5%) of the respondents' mothers were illiterate while 171 (21.4%), 185 (23.1%) and 216(27.0%) had attained primary, secondary and higher level of education, respectively. Likewise it is found that 565 (70.7%) of the total respondent's fathers are literate. Specifically, 256 (32%) reported that their fathers have attended higher educational level, 138(17.3%) secondary and 171 (21.4%) primary. On the other hand, 235 (29.4%) of the respondents' reported that their fathers were illiterates. Respondents' were also asked to report their parents' income and they reported that 216 (27%) of the parents earned less than Birr 500 per month, 274 (34.3%) earned Birr 501-1000 per month while the remaining 310 (38.8%) earned more than Birr 1000 per month.

Concerning discussion about adolescent's sexual issues, the data showed that 448(56.0%) girls disclosed that they have communicated with their parents about sexual matters. The focal areas of discussion were reported to be 277(61.8%) menstrual cycle, 218(27.3%) HIV/AIDS, 138(30.8%)

physical development, 120(15.0%) avoiding sexual activities before marriage, 80(17.9%) how pregnancy occurs, 59(13.2%) method of contraceptive, and 54(6.8%) STDs.

Data were also collected on the reasons for non-communication about sexual topics between parents and adolescents. The data showed that 147(41.8%) preferred to talk with someone else other than parents, 117(33.2%) said that they afraid to talk with their parents, 35(9.9%) their parents were not interested in discussing these issues while 25(7.1%) of them said that these topics upset their parents. During the time of survey 349(43.6%) were living with intact parents, whereas 651(56.4%) were living with non-intact parents.

**Table 3.3 Parental Characteristics of Respondent's, Addis Ababa: 2007**

Characteristics	Number	Percent (%)
<b>Parental Religion (N=800)</b>		
Orthodox Christian	570	71.2
Muslim	139	17.4
Catholic	29	3.6
Protestant	62	7.8
<b>Parental Religious attendance (N=800)</b>		
At least once a week	459	57.4
Occasionally	274	34.2
Never attend	67	8.4
<b>Mother's Education (N=800)</b>		
Illiterate	228	28.5
Primary (1-8)	171	21.4
Secondary (9-12)	185	23.1
Higher education	216	27.0
<b>Father's Education (N=800)</b>		
Illiterate	235	29.4
Primary (1-8)	171	21.4
Secondary (9-12)	138	17.2
Higher education	256	32.0
<b>Parental Income (Birr per month) (N=800)</b>		
Less than Birr 500 per month	216	27.0
Birr 501-1000 per month	274	34.2
More than Birr 100 per month	310	38.8
<b>Discussion about sexual matters (N=800)</b>		
Yes	448	56.0
No	352	44.0

Table 3.3.....cont'd

<b>Discussion with (N=800)</b>		
Both parents	224	28.0
Mother only	59	7.4
Father only	165	20.6
No discussion	352	44.0
<b>Topic of Discussion (N=448)*</b>		
HIV/AIDS	274	61.2
Menstrual cycle	277	61.8
Body change (Physical development)	138	30.8
Avoiding sexual activates before marriage	120	15.0
How pregnancy occurs	80	17.9
Method of contraceptive	59	13.2
STDs	54	6.8
<b>Reasons for not Discussing (N=352)*</b>		
Prefer to talk with someone else	147	41.8
Afraid to talk with my parents	117	33.2
They are not interested in discussing these issues	35	9.9
This topic upsets their parents	25	7.1
<b>Living Arrangement (N=800)</b>		
Intact	349	43.6
Non intact	651	57.4

\* Multiple responses

## **IV. PARENTAL CHARACTERISTICS AND FEMALE ADOLESCENTS SEXUAL BEHAVIOR**

### **4.1. Bivariate Analysis Results**

This section deals with the bivariate association between parental characteristics and female adolescents' sexual behavior. Bivariate analysis was done by cross tabulating the dependent variables with the independent variables and applying the chi square test.

#### **4.1.1 Differentials of Female Adolescents' Sexual Behavior by Selected Socio Economic and Demographic Characteristics**

The bivariate analysis for respondents' socio-economic and demographic variables showed that age, religiosity and business engagement have a significant relationship with the level of sexual initiation. By comparison, variables like ethnicity, religion, educational level and childhood place of residence do not have a significant relationship with the level of sexual initiation dependent variable (Table 4.1).

Age of the respondents has a significant association with their sexual behavior at P -Value <0.001. According to Table 4.1, the proportion of sexually active students in their middle adolescence (age 17-19 years) is higher than the early adolescence (age 14-16 years). Only, 6.2% of the respondents in the age group of 14-16 years started sexual intercourse while the rate is 16.7% among those in the 17-19 age group. This confirms that as the age of the adolescent's increases, the prevalence of the level of sexual commencement increases. This is because during the period of adolescence as age increases, adolescents subject to adoption of western styles that expose to sexual initiation and removal from parental supervision.

Religious attendance of the students has a significant association with the prevalence of sexual initiation ( $X^2=80.386$ ,  $P<0.001$ ). The pattern of the relationship demonstrates that the proportion of sexually active students increases when frequency of attending religious services decreases. Accordingly, Table 4.1 reveals that, 4.6% of the students who attended religious institutions at least once per week, 19.7% of the student who attended such services occasionally, and 31.2% of the student who never attended Church/Mosque services at all were engaged in sexual activity.

Employment of female adolescents appears to have a statistically significant relationship with the prevalence of sexual initiation ( $X^2=29.932$   $P<0.001$ ). Among the adolescents who were currently employed 24.9% were involve in sexual activities while the rate among those engaged in sexual activity was only 9.3%.

Ethnicity of the respondents does not have a significant association with the prevalence of sexual initiation. Nevertheless, the distribution of sexually active respondents by ethnicity were Oromo 14.3%, Amhara 13.6%, Gurage 9.2% 13.6% others including Tigraway. With regard to religion, though the chi-square test does not establish a significant association with the prevalence of female sexual behavior, 16.2%, 12.9%, 10.9% and 9.1% of Protestant, Orthodox, Muslim and others including Catholic respondents, respectively, had begun sexual intercourse.

Childhood place of residence demonstrates that even though the relationship is not statistically significant, there are a slightly higher proportion of sexually active students with rural and other urban background while it is lower for those from Addis Ababa. The prevalence of sexual initiation by childhood place of residence, as indicated in Table 4.1, was 12.2% for those living in Addis Ababa, 14.4% in other urban and 17.4% in rural area.

Concerning to educational attainment, prevalence of sexually initiation rises as the level of education of the respondent's increases.

**Table 4.1. Proportion of Respondents who are Sexually Active by Selected Socio-Economic and Demographic Characteristic, Addis Ababa: 2007**

Variables	Sexual Behavior			Chi- Square (X <sup>2</sup> )
	N	Ever had Sex	Never had Sex	
<b>Age</b>				18.924***
14-16	308	19(6.2%)	289(93.8%)	—
17-19	492	82(16.7%)	410(83.3%)	—
<b>Ethnicity</b>				3.051
Amhara	359	49(13.6%)	310(86.4%)	—
Oromo	168	24(14.3%)	144(85.7%)	—
Gurage	207	19(9.2%)	188(90.8%)	—
Tigraway	66	9(13.6%)	57(86.4%)	—
<b>Religion</b>				1.778
Orthodox	544	70(12.9%)	474(87.1%)	—
Muslim	138	15(10.9%)	123(89.1%)	—
Protestant	74	12(16.2%)	62(83.8%)	—
Catholic	44	4(9.1%)	40(90.9%)	—
<b>Religious attendance</b>				80.386***
At least once per week	481	22(4.6%)	459(95.4%)	—
Occasionally	178	35(19.7%)	143(80.3%)	—
Never attend	141	44(31.2%)	97(68.8%)	—
<b>Childhood place of Residence</b>				0.842
Addis Ababa	687	84(12.2%)	603(87.8%)	—
Other Urban	90	13(14.4%)	77(85.6%)	—
Rural	23	4(17.4%)	19(82.6%)	—
<b>Higher Grade Attend</b>				2.269
(9-10) Grade	308	32(10.4%)	276(89.6%)	—
(11-12)Grade	492	69(14.0%)	423(86.0%)	—
<b>Currently Employed</b>				29.932***
Employed	173	43(24.9%)	130(75.1%)	—
Not Employed	627	58(9.3%)	569(90.7%)	—
<b>Total (N)</b>	<b>800</b>			

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001

#### **4.1.2 Differentials in Female Adolescents' Sexual Behavior by Knowledge about HIV/AIDS, STDs and Contraception**

Apart from knowledge about HIV/AIDS and STDs, Table 4.2 reveals that, knowledge about contraception had a significant relationship with the prevalence of sexual activity.

Accordingly, knowledge about contraception and the prevalence of female sexual behavior had a significant association ( $X^2 = 4.018$ ,  $P < 0.05$ ). Among the respondents who have knowledge about contraceptive, 14.0% were engaged in sexual affairs while only 8.7% of those without knowledge are sexually active.

Although there is no statistically significant association between knowledge about STDs other than HIV and sexual behavior, 11.8% of the respondents who had such knowledge have initiated sex compared to 16.2% of those without such knowledge. With regarding to knowledge about HIV/AIDS only 13.1% of the students who had better knowledge about AIDS had started sex. Among those with insufficient knowledge, the sexual activity rate is only 8.2%.

**Table 4.2. Proportion of Respondents Who Are Sexually Active by Knowledge about HIV/AIDS and STDs and Contraceptives, Addis Ababa: 2007**

Independent Variables	Dependent Variable (Sexual Behavior)			Chi-Square (X <sup>2</sup> )
	N	Ever had Sex	Never had Sex	
<b>Knowledge about AIDS</b>				1.414
Better	727	95(13.1%)	632(86.9%)	—
Poor	73	6(8.2%)	67(91.8%)	—
<b>Knowledge about STDs other than AIDS</b>				2.252
Yes	646	76(11.8%)	570(88.2%)	—
No	154	25(16.2%)	129(83.8%)	—
<b>Knowledge about Contraceptive</b>				4.018*
Yes	592	83(14.0%)	509(86.0%)	—
No	208	18(8.7%)	190(91.3%)	—
<b>Total(N)</b>	800			

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001

#### **4.1.3 Differentials in Female Adolescents' Sexual Behavior by Selected Parental Characteristics of the Respondents**

Table 4.3 shows the relationship between the prevalence of female adolescent's sexual behavior and selected parental characteristics. The chi-square test indicates that all the parental factors (parental religion, parental religious attendance, mothers' education, Fathers' education household income, discussion about sexual matters and living arrangement) have an association with the adolescent's sexual behavior at P -Value<0.001.

As indicated in, Table 4.3 again 11.9% of the students whose parents were Orthodox Christians and 23.1% other Christian (Catholics and Protestants) and 8.6% Muslims were engaged in sexual intercourse. With regard to parental religious attendance, the bivariate analysis found that when frequency of attending religious services increased, the proportion of

sexual active students decreased. For example, only 3.1% and 14.2% of the students whose parents attend religious services at least once in a week and occasionally, respectively had started sex whereas the proportion increases to 71.6% in the case of those whose parents never attended religious services.

Parent's education was measured in this study by father's education and mother's education. For both fathers and mothers education, Table 4.3 shows that the proportion of sexually active students declines as education increases. Accordingly, 18.3% of students whose fathers were illiterate, 18.1% primary and 6.9% secondary and above started sexual intercourse at the time of the survey. On the other hand, 26.3% of students whose mothers were illiterate, 13.5% primary and 4.5% secondary and above started sexual intercourse at the time of the survey.

According to the results of the survey, household income also has an association with female adolescent's sexual behavior. The proportion of adolescents who were sexually active in households that earn less than Birr 500 per month, Birr 501-1000 per month and more than Birr 1000 were 22.2%, 12.8% and 5.8%, respectively.

Parent-adolescent communication about sexual matters was also another important variable to influence female adolescents' sexual behavior. Table 4.3, indicates that only 4.5% of the students who had discussion with their parents about sexual matters initiated sex while the rate is 23.0% among those respondents who had not had discussion on the subject matter.

Concerning living arrangement, among the respondents who were living with both parents only 4.0% had started sex; whereas, the sexual activity rate was 19.3% among those who were living in non intact families.

**Table 4.3. Proportion of Respondents who are Sexually Active by Parental Characteristic, Addis Ababa: 2007**

Variables	Sexual Behavior			Chi- Square (X <sup>2</sup> )
	N	Ever had Sex	Never had Sex	
<b>Parental Religion (N=800)</b>				42.936***
Orthodox Christian	570	68(11.9%)	502(88.1%)	—
Other Christian*	91	21(23.1%)	70(76.9%)	—
Muslim	139	12(8.6%)	127(91.4%)	—
<b>Parental Religiosity (N=800)</b>				250.337***
At least once per week	459	14(3.1%)	445(96.9%)	—
Occasionally	274	39(14.2%)	235(85.8%)	—
Never attend	67	48(71.6%)	19(28.4%)	—
<b>Mother's Education (N=800)</b>				62.911***
Illiterate	228	60(26.3%)	168(73.7%)	—
Primary (1-8)	171	23(13.5%)	148(86.5%)	—
Secondary (9-12) and above	401	18(4.5%)	383(95.5%)	—
<b>Father's Education (N=800)</b>				23.452***
Illiterate	235	43(18.3%)	192(81.7%)	—
Primary (1-8)	171	31(18.1%)	140(81.9%)	—
Secondary (9-12) and above	394	27(6.9%)	367(93.1%)	—
<b>Household Income (Birr/Month) (N=800)</b>				31.106***
<500	216	48(22.2%)	168(77.8%)	—
501-1000	274	35(12.8%)	239(87.2%)	—
>1000	310	18(5.8%)	292(94.2%)	—
<b>Discussion about sexual matters (N=800)</b>				61.470***
Yes	448	20(4.5%)	428(95.5%)	—
No	352	81(23.0%)	271(77.0%)	—
<b>Living Arrangement (N=800)</b>				41.637***
Intact	349	14(4.0%)	335(96.0%)	—
Non intact <sup>a</sup>	451	87(19.3%)	364(80.7%)	—
<b>Total (N)</b>	800			

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001

<sup>a</sup> Includes those who were living with single parent as well as neither of the parents.

## 4.2. Multivariate Analysis Results

Multiple logistic regression analyses were applied to examine the net effect of each independent variable on sexual behavior, by controlling for the effects of all other intervening variable. The effects of the socio-economic and demographic characteristics of respondents and parental characteristics were analyzed in separate regression models (Model I and Mode II, respectively). Then, to see the overall net effect of all variables, both socio- economic and demographic characteristics of respondents and parental characteristics were included in the same model (Model III).

Before running the model, correlation coefficients were estimated to test the existence of multicollinearity among some of the independent variables. Accordingly, it was found out that there a statistical significant correlation above 0.64 between (a) parental religion and parental religious attendance, (b) mother's education and father's education, (c) parent adolescent discussion about sexual matters and with whom adolescents discuss about sexual matters as well as (d) respondent's religious attendance and parental religious attendance. Thus to maintain the assumptions of the model, that predicting variables shall be independent of each other (Chan,2004)parental religion, fathers education, persons with whom adolescents discuss about sexual matters were excluded from Model II while respondents religious attendance was also omitted from model III . With regard to the significance of the model, the Hosmer and Lemeshow Test for all the three models was run and the results indicate that the models have an adequate fit for the data (Chi-square values for goodness of fit have P-values greater than 0.05).

#### **4.2.1. Multivariate Analysis Results of Female Adolescents' Sexual Behavior by Selected Respondent's Characteristics (Model I)**

Variables included in model I are respondents' socio-economic and demographic characteristics, knowledge about HIV/AIDS and STDs, as well as knowledge about contraception. As the relationship between sexual behavior and knowledge about HIV/AIDS and STDs variables has found to have statistically insignificant relationship during the bivariate analysis, it is not included in the binary logistic model.

Among the variables included in Model I, as indicated in Table 4.4, except knowledge about contraception have significant effects on female sexual behavior. The results of the multivariate analysis indicate that the relative risk of involving into sexual intercourse is 1.5 times higher for the adolescents who have knowledge about contraception than those who have not the knowledge. The causal relationship between contraceptive and sexual activity can be established by preceding knowledge of contraceptive to sexual activity or the other way round. In this case, however, it tested the influence of knowledge of contraceptive on sexual activity.

In the case of the adolescent's age, the relative risk of sexual involvement decreases by 65.1% for girls in the age group of 14-16 years as compared to girls in the age group of 17-19 years.

Taking parents who never attended religious services as a reference group, respondents whose parents attended religious services occasionally had a lower risk of involvement into sexual intercourse. Such risk decreases by 59.3%. On the other hand, when the frequency of attending religious services increases to at least once per week, the relative risk of involvement into sexual intercourse decreases by 91.6%. It is also found

that female adolescents engaged in business activities are 3.4 times more likely to involve into sexual initiation than those who do not engaged in business activities.

#### **4.2.2. Multivariate Analysis Results of Female Adolescents' Sexual Behavior by Selected Parental Characteristic (Model II)**

The independent variables contemplated in this model are parental religious attendance, mother's education, household income and parent adolescent discussion about sexual matters and living arrangement. All the variables except relation between household income less than Birr 500 category and Birr 501-1000 category have significant relation at P value less than 0.01.

**Table 4.4. Multivariate Analysis Results of female adolescents' Sexual Behavior, Addis Ababa: 2007**

Independent Variables	Model I Respondent's Characteristics			Model II Parental Characteristics			Model III Respondent's and Parental Characteristics		
	B	S.E.	Exp (B)	B	S.E.	Exp (B)	B	S.E.	Exp (B)
<b>Age</b>									
14-16	-1.054	.289	.349***	—	—	—	-.493	.338	.611
17-19 <sup>RC</sup>			1.000	—	—	—			1.000
<b>Religious Attendance</b>									
At least once per week	-2.472	.304	.084***	—	—	—	—	—	—
Occasionally	-0.900	.284	.407**	—	—	—	—	—	—
Never attend <sup>RC</sup>			1.000	—	—	—	—	—	—
<b>Business Engagement</b>									
Engaged	1.218	.252	3.379***	—	—	—	.038	.350	1.039
Not Engaged <sup>RC</sup>			1.000	—	—	—			1.000
<b>Knowledge about contraceptive</b>									
Yes	.406	.297	1.501	—	—	—	.171	.371	1.186
No <sup>RC</sup>			1.000	—	—	—			1.000
<b>Parental Religious Attendance</b>									
At least once per week	—	—	—	-4.125	.445	.016***	-4.053	.452	.017***
Occasionally	—	—	—	-2.786	.397	.062***	-2.722	.401	.066***
Never attend <sup>RC</sup>	—	—	—			1.000			1.000
<b>Mother's Education</b>									
Illiterate <sup>RC</sup>	—	—	—			1.000			1.000
Primary (1-8)	—	—	—	-.635	.346	.530*	-.596	.364	.551*
Secondary (9-12) and above	—	—	—	-1.005	.374	.366**	-.976	.383	.377*
<b>Household Income (Birr/Month)</b>									
<500 <sup>RC</sup>	—	—	—			1.000			1.000
501-1000	—	—	—	-.389	.332	.678	-.404	.350	.667
>1000	—	—	—	-1.089	.404	.337**	-1.018	.430	.361*
<b>Discussion about sexual matters</b>									
Yes	—	—	—	-1.912	.350	.148***	-1.861	.357	.155***
No <sup>RC</sup>	—	—	—			1.000			1.000
<b>Living Arrangement</b>									
Intact	—	—	—	-.974	.356	.378**	-.908	.362	.403*
Non intact <sup>RC</sup>	—	—	—			1.000	1.000		
<b>Constant</b>	-0.992	.312	.371	2.887	.463	17.935	2.770	.595	15.956

N=800  
-2LL= 483.630  
HLT = .993

N=800  
-2LL= 342.930  
HLT=.601

N=800  
-2LL= 340.250  
HLT=.234

RC= Reference Category,  
\* P<0.05, \*\* P<0.01, \*\*\* P<0.001,  
B=beta coefficient,  
S.E=standard error,  
Exp (B) =odds ratio

Table 4.4 revealed that the likelihood of being sexually active for the girls whose parents had attended religious services at least once per week and occasionally declined by 84% and 93.6%, respectively, as compared with those whose parents never attended. Thus an adolescent's initiation of sexual intercourse was less likely when their parents attended religious services frequently.

Mother's education also had an influence on female adolescents' sexual behavior. As mother's education progressed, the relative risk of engaging in sexual activities was reduced. According to Table 4.4, the likelihood of being sexually active for the adolescents whose mothers were at least 1- 8 grade literate decreased by 47% as compared to those adolescents whose mothers were illiterate. When the level of education increased to secondary and above, the odds of engaging in to sexual initiation decreased by 64% as compared to illiterate mothers.

Pertaining to household income, the multivariate analysis result showed that the relative risk of being sexually active for female adolescent was reduced, as household income rose. Table 4.4 showed that respondents belonging to parents who earned above Birr 1000 per month were 66.3% less likely to engage into sexual activity as compared to those parents who earn below Birr 500 per month.

Adolescents who discussed with their parents about sexual matters were 85% times less likely to involve into sexual activity than those adolescents who had no such discussion. The odds of involving into sexual initiation were decreased by 62.2% for those adolescents living with intact parents as compared to the adolescents living with non intact parents.

#### **4.2.3. Multivariate Analysis Results of Female Adolescents' Sexual Behavior by Selected individual Parental Characteristic (Model III)**

This model integrated parental and individual characteristic of respondents. Parental religious attendance, mother's education, household income, parent adolescent discussion about sexual matters and living arrangement have statistically significant effect on the dependent variable at P-value less than 0.05. By comparison, respondent's age, their engagement in business activity and knowledge about contraception had no statistically significant effect on the sexual behavior of adolescents.

According to findings of the survey, parent's religious attendance has statistically significant effect on the adolescents' sexual behavior. When adolescents' parents attended religious services at least once per week and occasionally, the likelihood of the adolescents' sexual involvement decreased by 96.7% and 93.4%, respectively compared to those whose parents belong to never attend religious services.

Female adolescents who have primary level educated mothers were 45% less likely to entail into sexual intercourse than those who have illiterate mothers. When mother's education upgraded to secondary and above, the relative risk of female adolescents' sexual engagement will be decreased by 62.3% as compared to illiterate mothers. Hence, the finding confirms that as mother's education enhances female adolescents' chances of involving into sexual intercourse decreases.

With respect to household income, when parents' income increases the chance of adolescents' to involvement into sexual activity decreases. The likelihood of involving into sexual intercourse is decreased by 33% and 64% when the adolescents' were belonging to parents who earn Birr 501-1,000 per month and above Birr 1,000 per month, respectively as compared to below Birr 500 per month earners.

As indicated in Table 4.4 adolescents who discuss with their parents about sexual matters are 85% less likely to engage in sexual activities than those who have no discussion. The odds of commencing sexual intercourse were decreased by 63.8% for adolescents who have intact parents compared to the adolescents who have no intact parents.

### **4.3. Discussion**

The analyses manifested the significant relationship between parental characteristics and female sexual behavior. The variables analyzed using bivariate and multivariate models also endorsed the hypothesis of the research.

Among the individual characteristics variables in Model I point out that age, religious attendance and business engagement have significant effect on the sexual behavior of adolescent girls. However, when parental characteristics are included in the analysis, the relative importance of individual attributes diminishes (Model III). This implies that parental characteristics have strong influence on the sexual behavior of female adolescents than that of their own. The insignificant effect of girl's involvement in business is not consistent with the finding of Mehari (2005) and studies undertaken elsewhere. This could probably be due to the reason that the majority of the respondents that engaged in business have already been exposed to sexual activities willingly or /and unwillingly.

#### ***Parents' religiosity reduces girl's involvement in sexual activity:***

Religious attendance of respondent's and their parent is one of the important factors that influence sexual behavior of female adolescents. Attending religious services has a significant contribution in delaying the commencement of sexual intercourse by female adolescents. This is

because most of religion institutions dictate moral and theological doctrine that restricts premarital sexual intercourse. Studies conducted by Woodroof (1985) and Erickson (1998) also confirmed that there is a negative relationship between religiosity and sexual behavior.

***Maternal education relates with girl's sexual activity:***

Parent's education particularly mother's education appears to exert substantial influence on female adolescents sexual behavior. Table 4.4 indicates that odds of engaging into sexual intercourse decreases when mothers education rises. It is, therefore, possible to argue that mothers have the appropriate knowledge to guide their children sexual behavior. This finding supports the hypothesis that sexual activity of female adolescents has a negative relationship with parent's education specifically mother's educational level.

***Girls from better off family are less likely to engage in sexual activity:***

It is found out that the relative risk of involving into sexual initiation decreases as household income increases. This finding indicates that if adolescent girls' day to day financial need is satisfied, they will not involve into business activities that expose them to sexual initiation. (Erickson, 1998 and Bogenschneider, 1996)

***Parent adolescent discussion about sex diminishes adolescent girl's involvement into sexual activities:***

Discussion about sexual matters also showed a significant relationship with the dependent variable. According to the multivariate result, adolescents who have communication with their parents about sexual issues are 85% less likely to involve into sexual activity. This implies that

if adolescents have open discussion with their parents about sexual matters, they will not engage in sexual activity by peer influence or curiosity.

***Intact marriage elongates the timing to involve into sexual relations sexual relations:***

Concerning living arrangement, Adolescents with intact parents are less likely to involve in to sexual activities. This shows that adolescents with intact parents receive focused attention and were coached properly about their sexual behavior.

## **V. SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1 Summary and conclusion**

During adolescence period many rapid bio-psychological changes take place making the adolescents vulnerable to psychological and physical environment. Those adolescents are characterized by immature decision-making, experimentation and subjection to peer influence. They attempted to solve problems by means of trial and error procedures, which results in physical, psychological and reproductive health problems. The reproductive health problem and its consequence are more complicated among female adolescents due to biological and socio economic and cultural sway. As an adolescent is a life stage that ought to have new and beginning focused attention, this paper attempts to look at how parental characteristics influence female adolescent's sexual behavior. To attain the objective, cross sectional study was designed and undertaken accordingly.

To address the problem appropriately, the researcher reviewed various literatures and adopt an analytical framework developed by Djamba (1997). Based on the relevant reviews of literature and analytical framework, hypothesis of the study were developed. Dependent and independent variables are also identified on the basis of the research hypothesis. The dependent variable; that is, sexual behavior was dichotomous variable while all the independent variables were categorical. During analyzes of the data univariate, bivariate and multivariate method of analyses were applied.

In general, the study found out that 12.6% of the respondents have started sex. The majority (55.4%) started sex during middle adolescence (14-15) and about 31% of them had multi-sexual partners. Excluding the 3.9% of the respondents who were raped, 16.8% have involved into sexual activity for economic reason. Among sexual active respondents 78.2% have

involved into sexual activity willingly to strengthen relationship with boy friends.

Evaluation of Knowledge about HIV/AIDS and STDs pointed out that 9.1% of the students had poor knowledge about HIV/AIDS while 19.3% had no sufficient knowledge about STDs. Concerning knowledge about contraception, 26% of the students have no knowledge about contraceptive methods. Besides, 64.4% of sexually active respondents did not use any contraceptive method during their first sexual intercourse. Among the girls who used contraceptives, only 61.1% used condom that protects them from unwanted pregnancy and transmission of disease related with sexuality. The fact that 27.8% of the contraceptive users were not consistent users implies that the students who were practiced sexual activities were engaged in unprotected sexual intercourse.

Among the explanatory variables (that is, parental characteristics and individual characteristics) that are identified to have relation with female sexual behavior, those that have significant relation have initially sorted out using chi-square test at  $P\text{-value} < 0.05$ . Further sorting was also made among the independent variables to avoid multicollinearity effect. It was then after these, multivariate analyses were equipped using binary logistic regression model to see the net effect of the variables by controlling other variables.

The individual and parental characteristics were treated separately in different models though they were contained together to identify the most predicting one. Though all of the individual characteristics included in the Model (that is, age, business engagement, and knowledge about contraception) were not found to have significant effect, parental characteristics (religious attendance, mother's education, income living arrangement and discussion about sexual issues) were found to exert significant effect in determining female sexual behavior.

Summarized result of the multivariate analysis implies that the relative risk of involving into sexual intercourse decrease, as their parents attends religious services frequently. Increased maternal education, household income and parent adolescent discussion about sexual matters also appears to reduce the relative risk of female adolescents' involvement in sexual activities. The odds of involving into sexual activities also decreased when adolescents enjoy living with intact parents.

This study, like all other self-administered questionnaires also encountered a limitation. This limitation was mainly observed during analysis of the study. However, with such understanding, the outcome of the study can be concluded as follows:

- Adolescents have a sketchy knowledge about reproductive health;
- A greater proportion of the students are practicing risky sexual activities;
- Permissive parental religious attendance exposes female adolescents to early sexual intercourse;
- Enhancing mother's education alleviates the problem of early commencement of female student's sexual intercourse;
- Household income plays an influential role in delaying female adolescent's sexual involvement;
- Intact parents can save their children from early sexual intercourse; and
- Open parent adolescent discussion about sexual matters mitigates adolescents from early sexual practices.

## **5.2 Recommendation**

Based on results and conclusions of the study, the following recommendations are forwarded:

1. Moral instructions are imperative in homes and religious institutions to enable the adolescents make responsible decisions with respect to relationship with the opposite sex. Hence, parents have to be encouraged attending religious services frequently and religious leaders also have to be informed and trained on how to instruct and disseminate information about sexual matters.
2. As high school students are in the age to be under parent's guidance, parents have the responsibility to coach their children sexual behavior. To undertake their responsibility, especially mothers; have to be educated and should be empowered economically.
3. Efforts shall be made to encourage home based parent adolescent communication about sexual issues at the early adolescence. To do so, parents should have to get scientific and systemized knowledge about reproductive health matters.
4. As parents are the primary stakeholders in shaping their children sexual behavior, it is advisable to stay intact by solving their tribulations.

In general, concerned institutions policy makers should have to focus on strengthening behavioral change, communication activities with extensive education on sexual abstinence and safe-sexual behavior by building up parental socio economic characteristics. Far beyond this, more holistic and realistic parent based programs and interventions are needed to address the issues of adolescent's sexual behavior. Parents also need to provide adequate time and resources for their children, particularly adolescent girls

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**Appendix - I**  
**Addis Ababa University**  
**School of Graduate Studies**  
**Department of Population Studies and Research**  
**Center**

This questionnaire is designed to gather information for the study that will be conducted on parental characteristics and adolescents' sexual behavior among Medhanialem and Bole high schools in Addis Ababa. Information obtained from you through this questionnaire is indispensable for the accomplishment of the study. You are, therefore, sympathetically asked to fill it as accurately and carefully as possible.

Despite the fact that the questionnaire attempts to explore your personal information, all the information will be incorporated only for this study and processed at utmost confidentiality. So, you are not expected to write your name in any page of the questionnaire. To indicate your responses please encircle or put "✓" mark or write your answer on the space provided for the questions that require written responses.

**Organization of the Questionnaire**

The questionnaire has five parts. Part one comprises questions on socio economic and demographic characteristics. Part two focused on information about parental characteristics. Part three deals with sexual behavior. Part four includes questions on knowledge about HIV/AIDS and STDs. Part five, the last part, comprise questions on knowledge about contraception.

## I. RESPONDENTS CHARACTERISTICS

100. School name \_\_\_\_\_
101. Grade \_\_\_\_\_
102. How old are you at your last birthday?  
Year \_\_\_\_\_
103. Where were you living since you were 10
1. Addis Ababa
  2. Other Urban
  3. Rural
104. What is your ethnic group?
1. Amhara
  2. Oromo
  3. Tigrie
  4. Guragie
  5. Other, Specify \_\_\_\_\_
105. What is your religion?
1. Orthodox
  2. Moslem
  3. Protestant
  4. Catholic
  5. Traditional
  6. Other (specify) \_\_\_\_\_
106. Have you ever attended religious services?
1. Yes
  2. No
107. How often do you attend religious services?
1. More than once per week
  2. Once a week
  3. Once a month
  4. Once in a while
  5. Never attend
  6. Others(specify) \_\_\_\_\_
108. Have you ever been engaged in any business activities to earn money for yourself?
1. Yes
  2. No

109. If your response in 109 is yes, in what business activities?
1. Selling goods
  2. Polish shoes
  3. Parking
  4. Casual labor
  5. Others (specify) \_\_\_\_\_

## II. PARENTAL CHARACTERISTICS

200. Are any or both of your parents alive?
1. Both alive
  2. Mother only alive
  3. Father only alive
  4. Both dead
201. With whom are you currently living?
1. Both Biological Parents
  2. Mother only
  3. Father only
  4. Mother and Stepfather
  5. Father and Stepfather
  6. Relatives
  7. Friends
  8. Guardians
  9. Others (specify) \_\_\_\_\_
202. Is your father literate?
1. Yes
  2. No
206. If your response for No. 205 is yes, what is his educational level?
1. Grade \_\_\_\_\_
  2. Certificate
  3. Diploma
  4. Degree and above
207. Is your mother literate?
1. Yes
  2. No
208. If your response for No. 207 is yes, what is her educational level?
1. Grade \_\_\_\_\_
  2. Certificate
  3. Diploma
  4. Degree and above
209. What is average monthly income of your parents?
- 
210. What is the religion of your parents?
1. Orthodox
  2. Muslim
  3. Catholic
  4. Protestant
  5. Traditional
  6. Others, specify \_\_\_\_\_

211. How frequently do your parents attend religious institutions?
1. More than once per week
  2. Once a week
  3. Once a month
  4. Once a while
  5. Never attend
  6. Other (specify) \_\_\_\_\_
212. Have you ever discussed with your parents about sexual matters?
1. Yes
  2. No
213. If yes, about which topics (you can circle more than one response)
1. Body change (physical development)
  2. Menstrual cycle
  3. How pregnancy occurs
  4. Avoiding (dealing) of sexual intercourse before marriage
  5. Methods of contraception
  6. HIV/AIDS
  7. STDs
  8. Others, specify \_\_\_\_\_
214. If No, why do you not discuss with your parents about sexual matters?
1. I am afraid to talk with them about these issues
  2. I prefer to talk with someone else
  3. I am not interested in discussing these issues
  4. This topic upsets them
  5. Others, specify \_\_\_\_\_
215. Who is your most important source of information about sexual matters?
1. Father
  2. Mother
  3. Relative
  4. Teacher
  5. Medical Doctors
  6. Teacher
  7. Boy friend
  8. Friends
  9. Other, specify \_\_\_\_\_

### III. SEXUAL BEHAVIOUR

300. Have you started sexual intercourse?
1. Yes
  2. No

301. If NO, what was your main reason for not starting sexual intercourse?
1. Religious reason
  2. Fear of parents
  3. Fear of HIV/STDs
  4. Fear of Pregnancy
  5. I have not found the right person
  6. Want to stay until I got married
  7. Other, specify \_\_\_\_\_
302. If you experienced sex, at what age did you start it?  
\_\_\_\_\_
303. What was the age of your partner with whom you had sex for the first time? You can guess \_\_\_\_\_
304. With whom did you have sexual intercourse at the first time?
- |                  |                         |
|------------------|-------------------------|
| 1. Acquaintance  | 4. Teacher              |
| 2. Boy Friend    | 5. Other, specify _____ |
| 3. Forced (rape) |                         |
305. Have you ever received money (gift) for sex?
- |        |       |                         |
|--------|-------|-------------------------|
| 1. Yes | 2. No | 3. Don't remember _____ |
|--------|-------|-------------------------|
306. Why did you decide to have sex the first time? (You can choose more than one answer)
- |                        |                         |
|------------------------|-------------------------|
| 1. To get a boy friend | 5. For fun              |
| 2. Forced              | 6. Friends doing it     |
| 3. To get money (gift) | 7. Other, specify _____ |
| 4. For love            |                         |

#### **IV. KNOWLEDGE ABOUT AIDS AND STDs**

400. What do you understand by "safe sex"? (You can choose more than one answer)
1. Abstaining from sex
  2. Using condom
  3. Avoiding multiple sexual partner

- 4. Avoiding sex with people who have multiple partner
- 5. Asking partner to be tested
- 6. Others, specify \_\_\_\_\_

401. Have you ever heard the existence of HIV/AIDS?

- 1. Yes
- 2. No

402. Do you believe that AIDS exists?

- 1. Yes
- 2. No

403. What were the sources of your information on HIV/AIDS? (You can choose more than one answer)

- 1. Friends
- 2. Parents
- 3. School (teachers)
- 4. Religious institution
- 5. Relatives
- 6. Media
- 7. Others, specify \_\_\_\_\_
- 8. Do not remember

404. What kind of care should be taken so as not to be infected/contacted with HIV/AIDS? (You can choose more than one answer)

- 1. Abstinence
- 2. Use of condom for every act of sex
- 3. Avoid kissing
- 4. Avoid blood transformation
- 5. Avoid using in common sharp edged materials
- 6. Avoid using in common household utensils
- 7. Avoid mosquito bites
- 8. Stay faithful to partner
- 9. Avoid casual sex
- 10. Other, specify \_\_\_\_\_



504. If No, Why?

1. It was not available
2. Did not think of it
3. You are not sure of its protection against AIDS, STDS & pregnancy
4. My partner did not want me to use it
5. It is embarrassing to buy
6. It diminishes pleasure
7. Other, specify \_\_\_\_\_

505. If you are sexually active, how often do you use contraceptive

1. Always (at every sexual intercourse)
2. Sometimes
3. Almost always
4. Not willing
5. Only once

## DECLARATION

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

Name Simret Tesfay

Signature 

Date 22/8/07

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

Eshetu GurmU (Ph.D).  
Advisor

  
Signature

22/8/07  
Date