

Addis Ababa University
College of Education and Behavioral Studies
School of Psychology

**Sexual Behavior of Adolescents in Single-sex and Co-education Schools:
The Case of Some Selected High Schools in Addis Ababa.**

Rezene Gebresilassie Giday

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This is to certify that the thesis prepared by Rezene Gebresilassie Giday entitled “Sexual Behavior of Adolescents in Single-sex and Co-education Schools: The Case of Some Selected High Schools in Addis Ababa” and Submitted in Partial Fulfillment of the Requirements for The Degree of Master of Arts in Developmental Psychology Complies with the regulations of the university and meets the accepted Standards.

Signed by the examining committee

Advisor

Signature

Date

Examiner

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Chair of department or

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Date

Graduate program coordinator

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Acronyms

| | |
|----------|--|
| BSAS | Brief Sexual Attitudes Scale |
| CDC | Center for Disease Control |
| CU | Contraceptives Use |
| EDHS | Ethiopian Demographic and Health Survey |
| EPS | Ethio-Parents School |
| FGD | Focus Group Discussion |
| G.L. | Grade Level |
| HIV/AIDS | Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome |
| KII | Key Informant Interview |
| NASSPE | National Association For single Sex Public Education |
| SAR | Sex Associated Risks |
| SB | Sexual Behavior |
| SEED | Student Employee Excellence Development |
| STD | Sexually Transmitted Disease |
| U.S | United States |

Abstract

The purpose of the present study was to assess the sexual behavior of adolescents in single - sex and co-education schools particularly those who are attending class in preparatory schools at Addis Ababa. It specifically examines the relationships among sexual behavior, contraceptive use and sex associated risks of adolescents. The study has used a mixed method research design. A total of 320 participants were selected using stratified random sampling techniques coupled with purposive sampling. More specifically, while the one single sex (boys only) school and informants of FGD and KII were purposively selected, the other three schools were selected through simple random sampling techniques. The respondents of the questionnaire scales were also selected through stratified random sampling. Moreover, both quantitative and qualitative data were generated from using both quantitative (BSAS questionnaire scales) and qualitative (FGD and KII) methods. In order to address the basic research questions, data were analyzed using Pearson correlation coefficients, Independent t-test, and ANOVA statistical techniques. Accordingly, the current study generally revealed several important findings about sexual behavior, contraceptive use and sex associated risks, and about their relationships. First, most adolescents become sexually active at around the age 16 and 17. It was also found that the driving forces for initiating sexual intercourse are: peer pressure, falling in love and the need to explore and experiment. Second, most of the adolescents do not use contraceptives when having sexual intercourse. Third, many adolescents are facing sex associated problems such as STDs, unwanted pregnancy and abortion. Fourth, a negative correlation was obtained between sexual behavior scores and sex associated risk factors scores. Fifth, a strong relationship has been found between contraceptive use and school type; Sex Associated Risks and grade level; Sexual Behavior and the age of adolescents. Finally, based on the results of the current study, the following recommendations were forwarded: provision of SRH training and contraceptives like condoms in the school settings; and more researchers should be conducted to see the impact of school types on adolescents' sexual behavior so as to provide data to policy makers and all stakeholders in the education sector.

Chapter 1

Introduction

1.1. Background of the Study

Adolescence is a developmental stage which is characterized by the development of secondary sexual characteristics as well as increase in interest to the opposite sex which results in establishing romantic relationships and initiating sexual activity (Santrock, 2011; Seme & Wirtu, 2008). Hence, it is a critical developmental stage for the development of sexuality (Hindin & Fatusi, 2009).

The nature of sexuality during adolescence is different from that of children's nature and meaning of sexuality not only because of the physical maturation but also because pregnancy is likely to happen as a result of sexual activity. Changes in thinking capacity on sexuality, the new social meaning given to sex, and the dating behavior of adolescents are also characteristics that make sexuality different at this stage (Santrock, 2011).

Adolescents have a higher proportion of pregnancies that are unintended and that end in abortion than do adults together with having the highest age-specific rates of sexually transmitted diseases (STDs), along with unintended pregnancy enact enormous costs in human pain and suffering, in social and economic opportunity, and in social welfare and health care (John S., Joyce A., Clea S., & Michael R., 2000). It is also noted that some of the behavioral determinants of unintended pregnancy and STDs, including HIV include: early initiation of sexual intercourse, frequency of intercourse, number of sexual partners and use of condoms and other forms of contraception.

In line with this, studies conducted in the US showed that 18 is the age at which most adolescents become sexually active. It is further noted that 40% of 9th to 12th graders have had sex (Blum, Beuhring, Shew, Bearinger, Sieving, & Resnick, 2000; CDC, 2018). In addition, the percentage of youth who reported having four or more sexual partners was 10% and condom use among sexually active high school students was 54% in 2017 putting more youth at risk for HIV and STDs (CDC, 2018).

A research conducted on 39 schools in Plateau state, Nigeria on 4218 students aged 12-21 years revealed that 909 students (34%) reported having sexual intercourse (Slap, Lot, Huang, Daniyam, Zink, Succop, 2003).

Studies in Ethiopia indicated that from 17.8% to 21.5% of the adolescents are sexually active and only about 40% of the sexually active adolescents reported consistent use of condom (Berhanu & Haidar, 2009). Moreover, adolescents are also likely to have a sexual partner who is five or more years older and be involved in multiple sexual partnerships (Baumgartner, 2009).

Adolescents also take part in different sexual behaviors other than sexual intercourse. A sexual fantasy, also called an erotic fantasy, is a mental image or pattern of thought that stirs a person's sexuality and can create or enhance sexual arousal. It is noted that in addition to providing sexual pleasure, erotic fantasies can also serve as a means for expressing one's sexual needs, providing a means to see sexual urges, preferences as well as a way to rehearse previous sexual experiences (Lisa J., Marcela R., & Kristin L., 2003). It is further added that, masturbation is also a safe and private way of exploring adolescents' sexuality and it is also considered as a normative behavior (Robbins C., Schick V., & Reece M., 2011). Moreover, adolescents are also involved in 'making out' which refers to physical intimacy without sexual intercourse (Fortenberry, 2013; Houck, C., Barker, D., Rizzo, C., Hancock, E., Norton, A., & Brown, L., 2014).

Various research conducted on adolescents indicated that their sexual behavior is influenced by the social context in addition to their personal characteristics. Consequently, contexts have become the main focus of researches in the process of studying adolescents' sexual characteristics (Madan, 2013).

Schools, being one of the major contexts, play a significant role in the development of adolescents' sexuality and sexual identity (Diane, 2002). What makes school an important context is the fact that adolescents spend most of their time in school compared to any other places outside their home. In fact, they spend more than one third of students waking time is spent in the school & school related activities (Lerner & Steinberg, 2004).

Schools can be categorized as a single-sex and co-educational based on the sex composition difference (Crossato, Morandi, & Satti, 2005; Gurian & Stevens, 2005). The sex composition of schools can have a great influence on adolescents' socioemotional and educational development, particularly their sexual behavior (Kathryn 2009; SEED, 2006).

Co-education schools as a context has been linked with some negative and positive behaviors of adolescents' sexuality. It is stated that co-education schools create an

environment that resembles to the real world social interaction which helps them to develop cross gender interaction skills (Nick, 2018; Chitra,2019).

On the other hand, studies have noted that Single-sex education is advantageous for adolescents especially girls because it delays romantic relationship compared to co-education (Nick, 2018). These studies further stated that such school setting protects girls from sexual harassment and boys' dominance (Blythe,2017). Those who pointed out the demerits of single-sex education on adolescents' sexuality argued that adolescents attending in single-sex education face difficulties in forming relationship with the opposite sex (Sullivan, 2012). Moreover, they believe that single-sex education setting creates conducive environment for homosexuality because it hinders interaction with the opposite sex (Lambert & Milham, 1968 as cited in Sullivan, 2012).

Therefore, in order to adequately understand adolescents' sexuality behavior, it is very crucial to take into consideration their contexts specially the school environment, in which they spend much of their time. In school settings such as single-sex and co-education, the impact of the environment might result in sexual behavior differences of the adolescents.

Studying this issue in a single-sex and co-education school setting addresses adolescents' sexual behavior which will serve as a springboard for interventions and government policies working on 'healthy' sexual behaviors of adolescents. In contrary, most studies emphasized in comparing adolescents' academic achievement in a similar setting.

1.2. Statement of the Problem

Different research findings indicated that co-education ad single sex school settings impact adolescents' sexual behavior both positively and negatively (Nick, 2018; Blythe,2017; Sullivan, 2012). For instance, some of the ways adolescents in single-sex schools are benefited included the increased tendency to delay in romantic relationships (Nick, 2018; Chitra, 2019) and will be free from the dominance of the other sex students (Nick, 2018; Blythe,2017). On the other hand, adolescents in co-education schools are benefited as they get the chance to experience the real world social settings in the schools which in return helps them to develop communicative skills with the opposite sex (Nick, 2018; Blythe,2017).

These days a growing number of adolescents are facing different social, psychological and physical problems due to unsafe and inconsiderate sexual intercourses specially those who are in high schools (BMC, 2012). Some of these problems are early and unwanted

pregnancy, unsafe abortion, school dropouts, HIV/AIDS and other STD infections (Bearinger, Sieving, Ferguson, Sharma, 2007). The above mentioned adverse consequences of reproductive health are predominant among the contemporary generation of adolescents in Sub-Saharan Africa who were born into the era of HIV/AIDS, widespread poverty, social conflicts and rapid societal changes (Blum & Nelson, 2004).

Though there are many research conducted on the impact of single-sex and co-education schools on adolescents' academic achievement, surprisingly, almost none of them carried out their research on comparing the schools impact on adolescents' sexuality (SEED, 2006; NASSPE, 2008; Skeleton & Francis, 2009; Sullivan, 2012).

Ethiopia being a Sub-Saharan Africa country, has a continuously growing number of school going adolescents. Adolescent girls (age 15-19 years old) alone constitute nearly one tenth of the total population in Ethiopia. Adolescents start having sex at an early age. The median age at first intercourse in Ethiopia is 16 years for girls and the median age at first marriage is 16.1 years indicating that for most girls, marriage drives sexual debut. By 15 years old, 29% of females are sexually active and by age 18, 41% of adolescent girls are married (EDHS, 2014). About one quarter of all girls experience their first birth before 18 years old, a number that climbs to 52% by age 20 (Jain, Aparna, Hussein Ismail, Elizabeth Tobey, and Annabel Erulkar., 2017).

In Ethiopia, current use of modern contraceptives among married adolescent girls (15-19 years old) is 40%, and among all adolescent girls (including those that are sexually active and unmarried), it is just 9%. The unmet need for contraception is 30% among married girls and 37% among unmarried sexually active girls (EDHS, 2014).

Among 18–24-year-olds, 39% had sex for the first time before age 18. Among rural women and those in the poorest wealth quintile, these proportions are higher than average, at 45% and 54%, respectively. Twenty-eight percent of recent births to women younger than 20 were unplanned; that is, they were wanted at a later time or were not wanted at all. Half of never-married women aged 15–19 who have been sexually active in the past three months, and 24% of those who are married, use some method of contraception (Guttmacher & IPPF, 2014).

Women who want to avoid having a pregnancy in the next two years but are not using a contraceptive method are considered to have an unmet need for contraception. Unmet need

is high among 15–19-year-old women, whether they are married (33%) or never-married and sexually active (37%) (Guttmacher & IPPF, 2014).

In 2008, Ethiopia had an estimated rate of 23 abortions per every 1,000 women aged 15–44. Of the estimated 382,500 abortions that year, only 27% were considered legal. More than half of all abortions were estimated to have led to complications (Guttmacher & IPPF, 2014).

Large proportions of Ethiopian women aged 15–19, both married and not, have an unmet need for contraception. High unmet need can lead to high levels of unintended pregnancy which, in turn, may lead to a range of negative outcomes, including unplanned births, induced abortions and reduced educational opportunities for the young women involved Guttmacher & IPPF (2014).

To address these issues, the Ethiopian Federal Ministry of Health has adopted and started implementing a national Adolescent and Youth Reproductive Health Strategy in 2006 to enhance reproductive health and well-being among young people in Ethiopia aged 10-24 years old (A360,un; Guttmacher & IPPF, 2014).

However, the relationship between sexual behavior and the context in which the behavior occurs has been assessed inadequately. It is further stated that most of the studies were done on limited samples of students and schools. Moreover, if the issue of adolescents' sexual behavior and the context in which it is not in depth and sufficient studies are not conducted to guide the policy making part of the government, Ethiopian adolescents future sexual behavior (Berhanu & Haidar, 2009).

Therefore, considering the school types as an important context for adolescents' sexuality, this study intends to address the following research questions.

RQ 1. How are the sexual behaviors of adolescents perceived in single-sex and co-education setting?

RQ 2. Is there a statistically significant difference in sexual behavior, contraceptive use and sex associated risks by school type, gender and age?

RQ 3. What major factors are perceived to drive adolescents' sexuality?

RQ 4. To what extent do adolescents use contraceptives?

RQ 5. What risk factors are perceived to be associated to adolescents' sexuality?

1.3. Purpose of the Study

General Objective

Generally, the study will attempt to assess the sexual behavior of adolescents in single - sex and co-education schools particularly those who are attending class in preparatory schools at Addis Ababa.

Specific Objective

Keeping the above general objective in mind, the study will have the following specific objectives.

- i. To assess the sexual behavior of adolescents in single-sex and co-educational school setting;
- ii. To check if there is a statistically significant difference in the sexual behavior Adolescents' in school type, age and sex;
- iii. To investigate the driving forces of adolescents' sexuality;
- iv. To asses contraceptives use in adolescence;
- v. To probe risk factors associated with adolescents' sexuality;

1.4. Significance of the Study

The direct beneficiaries of this research are adolescents learning in four single-sex and co-education schools. However, the outcomes of the research give tentative indications about the sexual behaviors of adolescents in single-sex and co-education school at the capital city of Ethiopia, Addis Ababa. The indirect beneficiaries of the study also include the policy makers in the education sector, private school owners and administrators, and the parents of the students.

The findings of this study have both theoretical and practical values. Its theoretical significance relates to shedding some light on the understanding about the sexual behavior, contraceptive use and sex associated risks of adolescents in single -sex and co-educational school settings and justify their own behavior. It will also serve as a spring board for further researches in the area.

Its practical value is associated with efforts being made of adolescents in the two school settings. Having an understanding of the current trends of the adolescents, policy makers in

the education sector, private school owners and administrators, and the parents of the students can play an active and effective role in educating, monitoring, and modeling adolescents to increase contraceptive use and minimize sex associated risk behaviors.

The schools from which the participants of the study are selected will have access to the outcomes of the research. The hard copy and PDF format of the final research report will be made available for the direct and indirect beneficiaries via different media. The schools administration will have the responsibility of educating both students and parents and informing policy makers of the sector so that further action will be taken based on the findings of the study.

1.5.Delimitations of the Study

This study has explored and compared college preparatory students from two single sex and two co-education high schools in the capital city, Addis Ababa. As such, there are distinct delimitations to the research.

One of its delimitations, lies in the study sites. The study encompasses only four schools that are found in the capital city Addis Ababa. The city is selected because almost all single-sex education schools are found in it. In addition to that the target population of the study was taken only from four schools. Some may question the generalizability of the results of the study. Hence, the results of this study might not be replicated in other schools which are not target population of the study because of location and/or socioeconomics.

The other point concerns with the participants. The study only encompasses eleventh and twelfth grade adolescents. The study focuses on the secondary preparatory school students due to the fact that adolescents at this age are likely to take part in different sexual practices because of the intense sexual drive they experience. In other words, the participants' age is delimited to adolescents whose age ranges between 16 and 21 years.

Adolescents sexuality is a very vast topic which makes it impossible to cover in a single study. In terms of study variables, the study is bounded to adolescents' sexual behavior contraceptives use and risk factors. Therefore, the study design, data collection tools and results are all confined to this fact.

1.6.Limitations of the Study

Among the limitations that the researcher encountered while conducting this study, one is that the research has covered only four schools of each educational setting; hence, the findings of this research could not be regenerated to all other similar schools. The other one is the unavailability of literature or research on the matter within Ethiopian context, which made it difficult to gather knowledge and have a cross-reference on similar research.

Another limitation or challenge was related to time constraints; the unreachability of the respondents at the time period that was set for collecting the data, leaving the researcher with little time to analyze and interpret the data. The respondents were unreachable due to the program of the schools which authorized the students for long examination breaks as they are 12th grade preparatory students taking national examination.

Further limitations were related to methodological limitation, i.e., the nature of instrument used to gather the data. The researcher has chosen only one adapted instrument for measuring the sexual behavior, contraceptive use and risk behavior of the students.

1.7.Key Terms

In this study:

Adolescents- are secondary preparatory single-sex and co-education school students (grade eleventh and twelfth) who are between the ages of 16 to 21 years.

Single-sex Schools- refers to schools attended by adolescents who are exclusively boys or exclusively girls.

Co-education Schools- refers to schools attended by adolescents of both sex (boys and girls).

Sexually active:

Sexualbehavior: refers to the sexual habits of single-sex and co-education adolescents which includes, being sexually active or not, at what age they became sexually active, who their sexual partners are, number of partners.

Contraceptiveuse: the practice of using methods like condoms, pills, diaphragms and others to intentionally prevent pregnancy and sexually transmitted diseases by single-sex and co-education adolescents.

Sex associated risks: refers to the possible negative outcomes of unsafe sex such as unwanted pregnancy, abortion and Sexually Transmitted Diseases by single-sex and co-education school adolescents

1.8.Organization of the Paper

The research paper is divided in to six chapters. Chapter one contains the introduction part of the paper which includes: background information and statement of the problem. It sets out objectives significance of the study and outlines the delimitation as well as the limitations of the study and organization of the entire paper. Chapter two discusses the related researches made previously and the findings that were made. The third chapter presents the methodology used, the research design, data sources, sampling technique, the sample population and the data collection instruments, the data gathering procedures along with data analysis techniques. Presented in chapter four are the findings, analysis and discussion of the data. The fifth chapter provides the summary of the findings of the study. The fifth chapter notes the discussion of the results of the study. The final chapter of the paper contains the summary of the study, conclusions and recommendations.

Chapter Two

Review of Related Literature

2.1. Meaning of Adolescence

The word adolescence is first used during the 15th century and derived from a Latin word *adolescere*, which means to grow up or to grow into maturity (Lerner & Steinburg, 2004). It is also widely believed that adolescence starts in biology due to its abrupt biological changes of puberty and ends in culture because of transitions into adulthood are less clearly marked (Smetana, Barr, and Metzger, 2006).

Different scholars categorize the period of adolescence in two three developmental periods. These developmental periods include different age ranges which are early adolescence (age 10-13), middle adolescence (age 14-17) and the late adolescence which is from eighteen to the early twenties (Smetana et al., 2006).

During adolescence multi-dimensional changes take place in different rate for both sexes (Santrock, 2011). These include social changes experienced by adolescents through schools, the roles given to them by their family as well as the community. Changes in structure of the brain, pubertal changes as well as an increase in their sexual interest are some of the biological changes that happen during adolescence. Moreover, psychological changes like an increase in cognitive capability also take place at this stage of development (Lerner & Steinburg, 2004; National Research Council, 2002).

2.2. Adolescence Sexual Behavior

Due to the fact that, during adolescence there is a continued focus on one's body change and escalating of hormone levels the developmental period is regarded to be the time in which sexual maturation, sexual interest as well experience increase very quickly (CDC, 2003).

It is further explained that, adolescence is a period of life that has come to be considered as a period of intense sexual drive and sexual and drug experimentation (Olukunle, 2007). During this stage, many adolescents are also involved in multi-sexual partnerships and premarital sexual activities (Okonofua, 2000).

Furthermore, as it is pointed out by Element, Gwede, Robert, Dermott (2001), there is an exploratory nature often exhibited by adolescents in all aspects of human activities including sexual practices.

According to WHO (20), adolescents constitute 85% and 20% of the population in developing countries and the world's population respectively. Moreover, Okonofua (2000) noted that Sub-Saharan African countries have larger proportion of adolescents than any region in the world whereas; in Ethiopia over half of the population consists of young people between the ages of 15-24 years (Youth Impact Ethiopia, 2012).

In line with this, many studies on the sexual behavior of African adolescents revealed that most of them are found to be sexually active and having multiple sexual partners with only negligible proportion using contraceptives (Odimegwa, Solanke, Luqman, Adedokun & Amos, 2002).

According to Moore & Rosenthal (2006), there is also a large worldwide concern regarding the behavior of adolescents' sexuality. This is manifested in the increased tendency of young people to associate with more sexual partners due to factors such as the decrease in the age of sexual initiation and increase in the age of marriage leading to high risk for pregnancy, HIV and other STD infections.

There is ample literature on adolescents' sexuality which shows that all adolescents engage in sexual activity in one or another way. The difference lies in the type of sexual activity they are engaged in and type and number of partners they have (Lerner & Stienberg, 2004). Adolescents can be engaged in one or many sexual activities. This includes erotic fantasies, masturbation, mutual petting, and sexual intercourse (Zgourides, 2000). In a sample of Spanish boys and girls, about 6% of 9–10 year old boys reported sexual fantasies, increasing to 66% among 13–14 year olds. Among girls, 15% of 13–14 year olds reported fantasies, with none reported by 9–10 and 11–12 year olds (Arnal&Llario, 2006 as cited in Fortenberry, 2013).

Sexual fantasy has been reported to be the most common type of sexual experience for most adolescents. This has been illustrated in a study conducted on a sample of adolescents whose age ranges from 13 to 18 years old. The study noted that 72% of them reported experiencing sexual fantasies (Lisa et al., 2003). In addition to providing sexual pleasure, erotic fantasies can also serve as a means for expressing one's sexual needs, providing a means to see sexual urges, preferences as well as a way to rehearse previous sexual experiences.

One of the most common ways adolescent's express sexuality is masturbation. According to Zgourides (2000), 90% of males and 60% of females reported masturbating at least once by the age 17. It is also noted that, masturbation is a safe and private way of exploring adolescents' sexuality and it is also considered as a normative behavior.

Another way of sexual expression is mutual petting or sometimes called 'making out' which refers to physical intimacy without sexual intercourse or sexual activities other than intercourse. Petting can be light (above the waist) or heavy (below the waist) (Zgourides, 2000).

Adolescents also express their sexuality through sexual intercourse (Lerner & Stienberg, 2004; Moore & Rosenthal, 2006). Adolescents engage in sexual activities the same as adults. However, they lack the maturity and commitment to have a long-term relationship (Zgourides, 2000).

Research accumulated in this area is focused on identifying the sexual behavior of adolescents in order to find ways of intervening sexual risks such as teen age pregnancy and abortion, STDs and so on and preventing early initiation of sex (Lerner & Stienberg, 2004; Moore & Rosenthal, 2006).

A national survey conducted in Serbia showed that 84% of male and 65% of female adolescents who participated in the survey reported having sexual experience, which showed a high rate of premarital sex. Moreover, 2 per 25 adolescents reported having abortion and 1 per 20 adolescent reported being raped or forced to participate in non-consensual sex with sex with a regular partner in an ongoing relationship (Stanković M., Miljković S., Grbeša G., Višnjic A. 2009).

Many studies on the sexual behavior of African adolescents revealed that most of adolescents are found to be sexually active and having multiple sexual partners with only negligible proportion using contraceptives (Odimegwa et al, 2002).

In line with this, a survey conducted on 14 countries of the sub-Saharan Africa revealed that about 25% of 5 to 19-year-olds reported sex before the age 15. Moreover, in most countries 15% of females reported marriage before the age 15, and greater than 20% had commenced childbearing. Early sexual debut and childbearing were more common among the least educated and rural females. However, having multiple sexual partners was

more common in males than females. Furthermore, males and females with and females with higher education were more likely to have multiple sexual partners (Doyle et al., 2012).

Another survey conducted on adolescence sexuality in Tanzania showed that more than one third (40.2%) of the participants reported experiencing sexual intercourse with mean age 17.2 years and one sixth (7.6%) having multiple sexual partners. It is further noted that contraceptives use increases with age in both males and females. Moreover, the main motivation for sex is found to be curiosity, experimentation and fun (Madan, 2013).

US statistics as cited in Zgourides (2000) noted that the average age for a first sexual intercourse is between 16 and 17 years. Sexually active adolescents either use contraception on an irregular basis, or they do not use at all. It is also reported that these adolescents do not consistently take precautions against sexually transmitted diseases.

2.3.Theoretical Perspectives on Adolescent Sexuality

Bio ecological system theory

Bronfenbrenner offered a theoretical perspective for research in human development. The perspective is new in its conception of the developing person, of the environment, and especially of the evolving interaction between the two. Bronfenbrenner noted that the ecological environment should be conceived as a set of nested structures (Vizcarrondo Oppenheimer, Mónica & Velez Agosto, Nicole & Soto, Jose., 2017).

Ecological system theory views the person as developing within a complex system of relationships affected by multiple levels of the surrounding environment. His theory consists of five systems, or levels, that make up a person's surroundings, environment and values. These five systems are the microsystem, the mesosystem, the exosystem, the macrosystem and the chrono system (Vizcarrondo et al., 2017; Santrock, 2011).

Paquette and Ryan (2001) describe the microsystem as the closest layer to the child and contain the structures with which the child has direct contact. Structure in the microsystem include family, school neighborhood, or childcare environments.

The microsystem is a small, immediate environment the child lives in. Children's microsystem will include any immediate relationships or organizations they interact with, such their immediate family or caregivers and their school or daycare. How these groups or

organizations interact with the child will have an effect on how the child grows; the more encouraging and nurturing these relationships and places are, the better the child will be able to grow. Furthermore, how a child acts or reacts to these people in the microsystem will affect how they treat the child in return (Vizcarrondo et al., 2017; Santrock, 2011).

Berk (2000) says that, the microsystem is closest environment for the child and includes the structures with which the child maintains direct contacts. In a microsystem the bidirectional interactions are at their strongest and they have the most powerful influence on the child. Still, the interactions on the outer levels can nevertheless have an influence on inner structures. At first the child's relation to other people is dyadic and later on the child can handle several simultaneous interaction relationships.

The mesosystem, exosystem, macro system and chrono system refer to relations between micro systems or contexts; links to social settings in which the individual does not have an active role and the individual's immediate context; the culture in which individuals live; the patterning of environmental events and transitions over the life course as well as sociocultural circumstances respectively (Vizcarrondo et al., 2017; Santrock, 2011).

Essentialist view

Essentialist theories of sexuality emphasize the crucial role of genetics, hormones, anatomy and other aspects of biological functioning in determining our behavior. Such theories, while not negating the role of environment in shaping some aspects of the human sexual repertoire, stress the constancy of many features, such as basic sexual drives and motivations. These biological constancies are seen to have implications for sexual behavior, such as the differential and stereotyped behaviors of men and women, the type of people we are attracted to and, at adolescence, the inevitability of conflict and stress as the hormonal changes swing into play.

However, these days, even biologically oriented theorists may argue against a purely biologically deterministic perspective on adolescent sexual behavior (e.g. Halpern 2003). Halpern states that to date, only relatively modest biological effects on adolescent sexuality have been found in research studies, with the variance accounted for in regression models typically ranging between 3 and 5 percent. It is to a consideration of social factors therefore that we now turn.

Age of puberty is partly inherited, providing a potential genetic basis for individual differences in the timing of first intercourse. Evidence of heritability is found in high inter correlations in age at menarche between mothers and daughters and between sisters. In addition, Genetic effects are also implicated by the finding that dopamine receptor genes are associated with age of first intercourse (Fortenberry, 2013).

The social constructionist perspective

Contrary to the biological determinist or essentialist view which dominated sexuality for many decades - sustains that sexuality is not universal and that biology has a small role in determining sexuality. Sexuality is deeply influenced and constructed by social, political, economic and cultural factors. Therefore, the specific meanings attached to it must be examined at particular historical moments in particular cultures. Based on this view, research attention has been shifting from sexual behavior itself to the social settings within which it takes place and to the cultural rules which organize it (Parker, 2001).

They show how sexual behavior can be heavily influenced by the situation in which an adolescent grows up including the rewards and punishments meted out in any given society, the underlying messages of a culture with respect to sex, and even political and economic forces. While learning theories try to describe the processes by which such influences occur, there is still much to be understood about individual differences in learning, and the interactive relationships between genes, biology and environment in shaping human behavior. The idea that we can describe sexual behavior through recourse to a couple of discourses, or a set number of sexual scripts, is unrealistic.

Biosocial models

Recent models of adolescent sexual behavior incorporate both biological and social influences. For example, Fortenberry (2013) found direct effects of pubertal development for both genders, along with an indirect effect of parent-child communication about sex on girls' level of sexual experience two years later. These studies underscore the need to consider social as well as biological influences.

There are various cultural, as well as biological; sources of influence on sexual behavior and these interact in complex ways. For example, a young person who appears sexually mature and has physical features designated attractive by the prevailing culture may

experience more social pressures to act in sexual ways than a late-developing youth or one who is perceived to be unattractive. Peers and potential sexual partners of sexually mature youths may encourage sexual involvement. Praise, popularity and self-esteem may accrue from engaging in sex. On the other hand, parents may be wary of the sexual potential of early maturing teenagers and may offer many sanctions against sex. All of this will be mediated by the young person's own sexual desires and values developed prior to puberty.

Sociocultural Influences

Human societies differ greatly in the cultural rules regulating sexual behavior and the vigor with which they are enforced. In some cultures, premarital sex is encouraged because pregnancy allows a determination of the fertility of potential marriage partners; in other cultures, premarital sex is strongly discouraged, especially for girls, because virginity is highly prized (Blacher & McIntyre, 2006).

Summary and implication

The five theoretical perspectives discussed above: The Bio ecological system theory, Essentialist view, the social constructionist perspective, Biosocial models and sociocultural influences can all show how adolescents' sexual behavior is determined/shaped by natural and environmental factors. Some of these theoretical perspectives emphasize the role of environment and some put more emphasis on the role of nature on adolescents' sexual behavior development. There are also theories that give balanced weight to both environmental and biological factors.

The Bio ecological system theory, the social constructionist perspective and sociocultural influences underline the environmental factors such as family, school, culture, social, political and economic factors. Whereas, the Essentialist view strongly notes the influences of genetics, hormones, anatomy and other biological factors. On the other hand, the Biosocial models recognizes both biological and social influences.

The fact that this study tries to understand the sexual behavior, risk factors and contraceptives use of adolescents in a context makes the theories that emphasize on the environmental factors (Bio ecological system theory, the social constructionist perspective and sociocultural influences) more appropriate than those which focus on biological factors.

Bronfenbrenner's theory of Bio ecological system consists of five' systems: the microsystem, the mesosystem, the exosystem, the macrosystem and the chrono system. A constructive interaction of these systems with the child will have a directly proportional effect on the child's growth. The microsystem being the closest layer to the child contains the structures with which the child has direct contact. Some structures in the microsystem include family, school, neighborhood, or childcare environments.

Consequently, the Bio ecological system theory is the most suitable theoretical perspective of all the theories on adolescent sexuality. It also has a direct and strong relation than all the three theoretical frameworks that accentuate environment because it plainly depicts the school as a component of the microsystem that can influence adolescents' sexual behavior.

2.4.Contexts for Adolescent Sexuality

The impact of social contexts on adolescent sexual behavior took the attention of researchers. Following that, researches revealed that social contexts provide a significant influence on shaping the sexual behavior of adolescents in addition to their personal characteristics. The social contexts of a child may embrace cultural, economic and political factors (Parker, 2001).

Researches that tried to address the causes of adolescents' premarital sexual behavior focus on the impact of micro level orientations on their psychological, social and physical characteristic. The microsystem is a small, immediate environment the child lives in. which includes their immediate family or caregivers and their school or daycare (Vizcarrondo et al., 2017; Santrock, 2011).

Family

Many researchers tend to focus on the impact of family structure and peers influence on adolescent sexuality. Teens that feel close to and communicate with their parents about sexual matters (e.g. relationships and contraception) are more likely to postpone sexual intercourse (Miller, Benson, & Galbraith, 2001 as it is cited in Adams and Berzonsky, 2003).

The relationship between parents and children, parental control and their communication have all been associated with sexual behaviors of adolescents. Improved

relationship between parents and the child will result in delaying sexual intercourse, occasional sexual intercourse and less sexual partners (Adams and Berzonsky, 2003).

Even though most of the studies are cross sectional studies, which are similar to the findings the longitudinal ones, the impact of mother child relationship quality has been related with both girls and boys, while the quality of the relationship between parents is influential for boys (Jaccard, J., Dittus, P., & Vivian, G., 2000).

Moreover, parental educational attainment (Eisenberg, M.E., Sieving, R.E., Bearinger, L.H. et al. J., 2006) is associated with a greater likelihood of teenage intercourse. These associations may reflect differences in perceived life opportunities and available social roles.

In addition to family relationship, the four characteristics of family and house hold which are; parents' type of marriage, family structure, family stability, and living away from home are important factors which are related with adolescent sexual behaviors.

Furthermore, different studies surveyed whether adolescents who are based in urban centers were more likely to be sexually active than adolescents who came from rural areas. The majority of these studies focused on measuring current place of residence. Results from these studies revealed that adolescents who grow up as well those who currently living in urban areas has considerably related with high probability of adolescents' sexual experience (Gupta, 2000; Slap et al., 2003; Laguna, 2001; Choe& Lin, 2001).

Peers

During adolescence the amount of time consumed with peers overall and with the opposite sex in specific increases considerably. On the other hand, time spent with members of a family decreases comparably by 60% from 5th to 12th grade (Tracy, Shaver, Albino and Cooper, 2001).

Of the major social influences, peers put forth main impact on adolescent sexual behavior in different levels. Same sex friends may impact the perceived acceptability of sexual behavior, and as well those who had prior sexual experience friends can be seen as a role model. Moreover, partners in a romantic relationship also creates suitable environment for practicing sexuality while they can also push their partner to have sex (Wyatt & Riederle, 1994).

As it is stated by (WHO, 2005), researches indicated that there is a positive relationship between the sexual behaviors of adolescents and their awareness about their friend's sexuality. For instance, a research conducted in Ghana shows that those youths who know that their friends are sexually active were found to be more than two times probably to involve in sexual activity when compared to those who don't perceive that their friends were not sexually active.

Spending too much time with peers having deviant behavior has associated with early beginning of sexual intercourse. On the other hand, spending time with conservative peers involving in additional activities is negatively associated with adolescents' sexual intercourse (Jaccard et al., 2000).

Romantic partners

Romantic or dating Relationships for teens have a stronger result on sexual behavior. As most teenagers become involved in relationships early and stay constantly, their sexual behaviors for both genders could be easily expected. On the study conducted by Jaccard et al. (2000), it is indicated that being in a romantic relationship enhances the probability of engaging in sexual activity.

Furthermore, on another study conducted on the national survey of family growth indicated that of participants who are under the age of 25 and below that who had their first sexual intercourse before the age of 18 said they were "going steady" (73.9 percent) with or engaged to (1.9 percent) their first sexual companion (Manning, John & Barley, L & Walton, J & Lewis-Jones, DI & Trivers, Robert & Singh, Devendra & Thornhill, Randy & Rohde, P & Berezkei, Tamás & Henzi, Peter & Soler, Manuel & Szwed, Anita, 2000).

Neighborhood Influences

According to Catherine, John, Claire & Paula (2005) within a neighborhood, which is shared local environment, a variety of characteristics may independently influence the reproductive health of its residents, including the availability of goods and services (such as family planning services), norms (such as values and behaviors) and opportunity structures (such as employment and education options).

It is further stated that neighborhoods are sources of information and role models for teen's sexual behaviors. Neighborhood context appears to be modestly associated with the

sexual initiation of adolescents. However, little support was found for neighborhood influence on contraceptive use, suggesting that other factors may play a more important role in shaping adolescents' contraceptive behaviors

2.5.School as a context for adolescents' sexuality

Some scholars focused on studying the influence of schools as a context for adolescent sexuality. Schools play a significant role in the development of adolescents' sexuality and sexual identity (Diane, 2002).

In line with this, Arnet (2004) mentioned that schools provide a suitable environment for adolescent's love relationships since these are places to meet friends with similar age on a daily basis which will also create a favorable environment for further relationships.

2.5.1. Adolescents in Single and Co-Education School Settings: General Overview

There are multiple denominations as to the exact meaning of co-education which is different from country to country. However, the actual name is often used to descriptively tell that schools having both girls and boys with no difference from other schools. However, from another angle it is referred in a more ideological state often aligned with policies of gender equality as indicated by Crosato, Morandi, & Satti (2005). Whereas, single-sex schools are those schools that hosts exclusively boys or exclusively girls (Gurian & Stevens, 2005).

There has been a continuous debate regarding the advantages of co-educational and single-sex education and its impact on the socio-emotional and educational development of children.

Advocates of single-sex education have different reasons for separating boys from girls. Some of the reasons are single-sex schools help to deliver an exceptional learning styles related to gender; helps to reduce bullying and sexual harassment; enhance the quality of work produced which will result in good academic achievement (NASSPE, 2008). These proponents also claim that all the conclusions are supported by different researches they have conducted in single-sex and co-education schools. In line with this, some researchers, even though they are not advocates of single-sex schooling, agree to take that these schools benefits a lot in improving the academic achievements (SEED, 2006; Skelton & Francis, 2009).

On the contrary, advocates of co-education argue that the results from the research conducted by single-sex schooling proponents are wrongly interpreted, exaggerated or they don't exist. Moreover, they believe that single-sex schools can affect students' social skills as well result in increased prejudice while co-education schooling help to avoid gender stereotypes through interaction (Kathryn, 2009; *The Malta Independent*, 2013).

They also further noted that, the co-education school environments play an affirmative role on creating a feeling of security and a sense of reciprocated respect. Moreover, advocates of co-education believe that those students from the single-sex schools lack the necessary communication skills with the opposite sex and readiness since they were not exposed to this kind of environment. (*The Malta Independent*, 2013)

2.6. Sexual Behavior of Adolescents in Single-Sex Education and Co-education Schools

Being one of the major contexts, schools deter adolescents' sexual behavior. The effect of the two sex based school settings: single sex and coeducation schools on adolescent sexuality has rarely studied especially the single sex schools. However, the few studies which are conducted in this area are reviewed here under in a way that addresses the positive and adverse effects of each school setting.

2.6.1. Adolescents in single-sex education.

The impact of single-sex school setting as a context for adolescents' sexuality has not been adequately studied. Due to the fact that most of the researchers conduct in this school settings primarily tend to focus on the merits and demerits of the context on adolescents' academic achievements (Sulivian, 2012).

However, proponents of single-sex schools underline the positive outcomes of the setting on adolescents sexual behavior. One of the merits mentioned by these scholars is that the setting plays a vital role in delaying romantic relationship among adolescents (Nick, 2018; Chitra, 2019). Moreover, the postponements of romantic relationship among the single-sex education adolescents has been reported to minimize the risk of teenage pregnancy (Sullivan, 2012).

Furthermore, single-sex school setting is also believed to protect girls from sexual harassment and boy's dominance which may lead to involvement in romantic relationships (Nick, 2018; Blythe, 2017).

On the other hand, opponents of single-sex schools argue that it affects adolescents' sexual behavior in a negative way. They further state that adolescents attending in single-sex education face difficulties in forming relationship with the opposite sex (Sullivan, 2012). In addition to this, Lambert & Milham (1968) as cited in Sullivan (2012) highlighted that single-sex education setting creates conducive environments for homosexuality.

2.6.2. Adolescents in co-education.

Similar to single-sex education co-education also has been educated for the advantages it offers for adolescents while others criticized it for the disadvantages it may shade on them especially for girls (Sullivan, 2012; Nick, 2018; Blythe,2017).

One of the points that are mentioned by the advocates of co-education setting is that it will create an environment that resembles to the real world. They argue that this helps the adolescents to practice and develop social interactions while creating conducive environment to cross-gender interaction (Nick, 2018; Blythe,2017).

On the other hand one of the disadvantages raised by both co-education and single-sex education advocates is that it creates a favorable environments for dating which in return leads to early exposure to premarital sexual practices (Nick, 2018; Chitra, 2019).However, proponents of co-education schooling argue that the above mentioned disadvantages are also an important aspects.

The other disadvantage of co-education is that high sexual harassment on the girls. It is further justified that even in co-education schools the degree of sexual harassment is lower in departments which have female heads (Nick, 2018; Blythe,2017).

2.7.Other Factors Affecting Sexual Behavior of Adolescents

Puberty

Puberty is considered as one of the crucial biological and social transitions in human development. Teenagers reaching puberty stage will begin to experience new sexual motives in their behaviors due to rapid hormonal and physical developments (Santrock, 2011).

As it is stated by Fortenberry (2013) reaching puberty at younger ages will create great sexual skills in both genders than their peers. Boys with faster pubertal maturation will

have earlier first intercourse than their peers as well girls who experience early menarche at younger age will have first intercourse at a younger age.

Pubertal Hormones have a strong impact on both sexual behavior and adolescent development. Researches like cross sectional studies have showed that the relationship between androgen hormones and sexual motivation and behavior during puberty. Others also manifested the level of testosterone on sexual interest and behavior. The higher levels have positive effect in women while the reverse effect on boys as it gets lower (Fortenberry,2013).

On the other hand, in post menarche Girls, Adolescent maturity have the direct effect on bringing change in their sexual behaviors other than testosterone hormones. These facts however leave us with the indirect effect of this hormone on stimulation of physical development and sexual attractiveness only (Fortenberry, 2013).

Media

Even though the influence of media on sexual behavior has not been examined and supported by studies sufficiently, the impression that media creates is undeniable. The Messages, music's, movies, music videos conveyed on the radio and TV have their own impact on adolescents' sexual behavior. Media has been seen as the leading sex educator (Strasburger,2012).

As is noted by Strasburger (2012), despite the large attention given to thenewly emerging media in the past decade (Internet, cell phones, iPads, social networking sites, etc.) the older media-TV, movies, and videos-still predominate among children and adolescents. The 2009 Kaiser survey of more than 2000 8–18-year-olds found that they spent an average of more than 7 hours a day with a variety of different media, but TV remains predominant.

2.8.Review of Local Studies

On the research done in Addis Ababa high school adolescents, it was found that 24% of the respondents were sexually active and that 70% of the sexually active adolescents, they had their first sexual intercourse between ages 14-16, and also found to be having more than one sexual partner (Mahari, 2005).

In Ethiopia, of the sexually active adolescents there were only 68.8% who had knowledge about contraception and the rest (31.2%) lacked knowledge about any of the contraception methods (Zemed, 2002).

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

According to Mehari (2005) 15 years were found to be the mean age of first sexual intercourse of the respondents from Addis Ababa private and government schools. Of the respondents, about three fourth of them 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.

Another study conducted by Ayalew (2007) on 371 adolescent students in Debreziet town indicated that 15 % of them have reported they had sexual experiences. In addition to that, of the total respondents, 29% mentioned that they didn't use a condom for reason that they trust their partners while 23 % were ashamed to ask for condom.

A study conducted on 590 randomly selected students in Nazareth by Astatke, Maureen & Robert (2000) using a cross-sectional design to examine sexual behaviors among Ethiopian high school students between the ages of 14 and 20 years where, the mean age of participants was 17, and most were between the ages of 16 and 18 revealed that most students (64 percent male and 89 percent female) were not sexually active. Only 56 percent of the sexually active youths reported ever using condoms.

2.9. Summary and Implication

Adolescence has been considered as an important period for sexuality due to the biological factors such as puberty and social factors like family, peers, culture and other contexts. Studies on adolescent sexuality tend to focus primarily on identifying and describing their sexual their sexual behaviors rather than considering the context in which the behavior manifested.

However, few studies revealed that adolescents' sexuality can be influenced by different social contexts. Of all the social contexts schools has been reported to take the lions share in shaping their sexual behavior.

The issue regarding segregation of schools based on sex has been a controversial issue for a long. Comparative studies conducted on these single-sex and coeducation schools have tried to show the merits and demerits of the two school settings. Most of the findings were focused on the students' academic achievement whereas; little attention was given their impact on the adolescents' sexuality.

Nonetheless, the impact of the two schools setting on adolescents' sexuality has been addressed in few studies. These reviews have stated that single sex education have favored for delaying romantic relationships and reducing boys dominance which will result in early experimentation. On the other hand, co-education is believed to provide a setting which resembles the real world life which in turn develops adolescents' social skills with the opposite sex in the later life.

Therefore, the related literatures reviewed in this chapter imply that since adolescence is a period characterized by an intense sexual drive and experimentation in different contexts, researchers should pay attention to study of sexual behavior of adolescents not only by focusing on the behavior but also by taking in to consideration the specific context where the behavior is highly influenced.

Chapter 3

Research Methodology

In this chapter, the study design, data sources (description of the study site, the participants and study population, target population as well as sample size and sampling procedure), instrument of the study (construction, validation, pilot study and reliability as well as administration), analysis techniques, and also ethical issues to be considered will be dealt with. It also explains why the researcher has opted for a mixed research approach.

3.1. Research Design

The research approach is determined by the objectives and research questions of a research which is the procedure taken for this study. According to Kent (2015), a quantitative research typically explores specific and clearly defined questions that examine the relationship between two events or occurrences, where the second event is related to the first event. Quantitative data is often gathered through surveys and questionnaires that are carefully developed and structured to provide with numerical data that can be explored statistically and yield a result that can be generalized to some larger population. On the other hand, qualitative research provides detailed description and analysis of the quality or the substance of the human experience. Therefore, both quantitative methods and qualitative procedures.

The main goal of this study was to assess the sexual behavior of adolescents in single-sex and co-education college preparatory schools at Addis Ababa and see if there is any relationship between the adolescents' sexual behavior and the context (school setting). This study, therefore, has employed mixed methodology, i.e., quantitative driven qualitative. As the researcher's main interest was examining if there is a relationship between the sexual behavior of adolescents and the school settings they learn.

Hence, the study has employed research participants' own point of view to understand the relationship under investigation by focusing on the experience and attitude of the students themselves.

According to Louis Cohen, Lawrence Manion and Keith Morrison (2000) surveys collect data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events. Hence, the study was a cross sectional survey study design. It was based on primary data collected on sexual behaviors of

adolescents' from single-sex and co-education in grade eleven and twelve from four schools at Addis Ababa.

As the research was conducted on four schools (2 single sex and 2 co-education), the outcomes of the research will be limited to that study area in that context but the final conclusion can be tested on further research with a different context and study area as to figure out other possible variables.

According to Onwuegbuzie & Collins (2007), most mixed method designs utilize time orientation dimension as its base. Time orientation refers to whether the qualitative and quantitative phases of the study occur at approximately the same point in time such that they are independent of one another (i.e., concurrent) or whether these two components occur one after the other such that the latter phase is dependent, to some degree, on the former phase (i.e., sequential).

The time orientation used for this study is concurrent design using identical samples for both qualitative and quantitative components of the study. An identical relationship is the one which indicates that the same sample members participate in both the qualitative and quantitative phases of the study.

Similarly, in this study, the researcher used identical samples for both components; the students who were participants in the interview were among the ones that participated in the survey. Moreover, both the qualitative and quantitative components took place at the same time; the interview was carried out right after the students were through with the survey.

The general characteristic of the participants included the following dependent and independent variables. The potential independent variables of the study are: school type, age group, gender, and grade level. The dependent variables for this study are: sexual behavior, contraceptive use, and sex associated risk factors.

3.2.Participants

3.2.1. Target Population.

The target population of this study was adolescents in some selected preparatory (grade 11 and 12) single sex and co-education schools at Addis Ababa. The adolescents were regular students attending in two single sex education schools and two co-education schools.

In these selected four preparatory schools, there were a total of 1426 students out of which 470 students were from single-sex education schools. The single sex schools selected were Nazareth school and Saint Joseph, 200 and 270 students were attending education in both schools respectively. On the other hand, 956 were from the co-education schools of which 324 were from Ethio-Parents and 632 students were from Bole preparatory school.

3.2.2. Description of the Study Site.

This study took place in the capital city of Ethiopia, Addis Ababa. Addis Ababa was selected as a research site due to the fact that most single sex schools of the country are found there. According to the 2007 census, the city has a population of 2,739,551 inhabitants. As a chartered city, Addis Ababa has the status of both a city and a state. It is where the African Union is headquartered and where its predecessor the Organization of African Unity (OAU) was based. It also hosts the headquarters of the United Nations Economic Commission for Africa (ECA), as well as various other continental and international organizations. Addis Ababa is therefore often referred to as "the political capital of Africa" for its historical, diplomatic and political significance for the continent. Addis Ababa lies at an elevation of 2,200 metres (7,200 ft) and is a grassland biome. The city is divided into 10 sub cities, and 99 weredas. These are: Nefas Silk Lafto, Kirkos, Lideta, Bole, Yeka, Kolfekeranio, Arada, Akaki-kality, Adisketema and Gulelesubcity.

3.3. Samples and Sampling Technique

3.3.1. Sampling Procedures.

The study used mixed methods sampling, the basic strategy that involves combining quantitative and qualitative sampling, i.e. stratified random sampling and purposive sampling respectively.

The study targets heterogeneous population which consisted of individuals of different school types, gender and grade levels. Thus, stratified random sampling technique was believed to be appropriate in order to assure that each homogeneous group is represented in the sample.

According to Louis Cohen, Lawrence Manion and Keith Morrison (2000) a stratified random sample is a useful combination of randomization and categorization because it splits the population into homogenous groups, each group containing subjects with similar

characteristics. It also enables the researcher to carry out both a quantitative and qualitative parts of a study. The quantitative piece of the study will be able to use analytical and inferential statistics, while a qualitative piece of research can target those groups who will be able to be approached to participate in the research.

Consequently, both probable (random) and non-probable (purposive) sampling techniques were used to select the schools from which the participants of the study are selected. There were a total of five single sex college preparatory schools in Addis Ababa, four were girls' only schools and one was boys only school. As a result, purposive sampling technique was used to take the only one boys only school in the city, St Joseph school. According to Louis Cohen, Lawrence Manion and Keith Morrison (2000) purposive sampling is used to select the cases to be included in the sample on the basis of their judgment of their typicality. In this way, the researcher builds up a sample that is satisfactory to a specific needs.

Then, balancing the number of single-sex education schools from each gender was vital to assure the gender representativeness of the sample. Hence, lottery method was employed to select one out of the four girls' only schools. In addition to this, two co-education schools were selected from preparatory schools that were found in the ten sub cities using the random sampling (lottery method) technique.

The selected single sex schools were Nazareth school (girls only school) and Saint Joseph (boys only school). There were 200 girls in Nazareth school and 270 boys in Saint Joseph enrolled at college preparatory level (in grade 11 and 12). There were a total of 131 co-education preparatory schools in Addis Ababa. Hence, the researcher used lottery method to select two co-education schools. The two co-education schools selected by lottery sampling method were Ethio-Parents and Bole preparatory schools in which 324 and 632 students were enrolled respectively in college preparatory level (grade 11 and 12). Whereas when we see the number of students by grade level, 782 students were in grade eleven and 644 students were in grade twelve.

3.3.2. Sample Size Determination.

With regard to the sample size 302 students were selected from the four schools based on the following statistical formula in order to assure the representativeness of the sample.

However, the sample size was fixed to 320 in anticipation for non-response to certain questions.

$$n = \frac{(Z^2)(N)(P)(Q)}{e^2 (N-1) + (Z^2) (p) (q)}$$

$$n = \frac{(Z^2)(N)(P)(Q)}{e^2 (N-1) + (Z^2) (p) (q)}$$

Where, N= the size of the population

n = sample size

Z = Standard variety at a given confidence level (at confidence level= 0.05, z value 1.96)

e = acceptable error or error tolerance (0.05)

p = proportion of population (0.5)

q = 1- p

Source: Kothari.C.R. (2004; Pp. 175-180)

Table 1

Population and the sample size determined through proportionate stratified sampling for the selected schools (grade 11 & 12).

| Type of school | Name of schools | Total population | | | Sample size | | |
|----------------|------------------|------------------|----------|-------|-------------|----------|-------|
| | | Grade 11 | Grade 12 | Total | Grade 11 | Grade 12 | Total |
| Single sex | Nazareth | 109 | 91 | 200 | 25 | 20 | 45 |
| | St, Joseph | 153 | 117 | 270 | 34 | 26 | 60 |
| Co-education | Ethio-parents | 164 | 160 | 324 | 37 | 36 | 73 |
| | Bole preparatory | 356 | 276 | 632 | 80 | 62 | 142 |
| Total | | 782 | 644 | 1426 | 176 | 144 | 320 |

Thereafter, at base line, using proportionate stratified random sampling technique students were categorized in to strata based on school type and grade level; there by ensured that each school type were represented with a number proportional to their proportion in their population, i.e. 105 from single sex and 215 from co-education schools. The same method was used to select the sample for each school and grade level (grade 11 & 12). Consequently,

45, 60, 73, and 142 students were selected using simple random technique (lottery method) from Nazareth, St. Joseph, Ethio-parents and Bole preparatory schools respectively. Following that, a total of 176 and 174 students were selected from grade 11 and 12 respectively (See the above table).

3.4.Measures

Primary sources of data were used to gather firsthand information which explores the relationship between sexual behavior and school setting. The primary sources used for the study were data gathered from adolescents in four high schools.

Furthermore, statistical data and information about students in the schools which was gained from the unit leaders and school principals was also used as a primary source in understanding the institutional context of the schools.

Secondary data were used to see what previous studies have found out and to identify gaps. For the sake of making this research more valid and worthy, relevant secondary sources helpful to this study were reviewed. These included: published and unpublished materials like books, journals and articles.

In the present study, data collection tools were triangulated and complemented from both qualitative and quantitative methods. As a result, Key Informants Interview (what others have observed about the behavior of the adolescents), Focus group discussion (what adolescents perceive about themselves and other adolescents), and self-report questionnaire (what adolescents say they think, or feel) were employed as instruments of data.

3.4.1. Questionnaire.

To measure the sexual attitude of adolescents the Brief Sexual Attitudes Scale (BSAS) has been found suitable for this study purpose. The BSAS is a multi-dimensional measure of attitudes toward sexual behavior. The attitude measure scale uses the standardized items of Hendrick and Hendrick (2006). The instrument has 23 questions that are rated on five-point likert scale ranging from strongly agree and strongly disagree to measure attitude towards sexual behavior. The BSAS is made up of four subscales: Permissiveness, Birth Control, Communion, and Instrumentality. “permissiveness” refers to open, casual sexuality; “sexual practices” represents responsible, tolerant sexuality; “communion” denotes emotional, idealistic sexuality; and “instrumentality” views sex as egocentric and very

biological. The items number 1-10 measure Permissiveness, items 11-13 measure Birth Control (Contraceptives), items 14-18 measure Communion and items 19-23 Instrumentality. All the items were used with little amendments to align it to Ethiopia cultural and social context. However, for this study purpose the items number 1 to 10 were used to measure Sex associated risks; items 11 to 13 to measure contraceptive use and items 14 to 23 to measure sexual behavior.

3.4.2. Key Informant Interview.

As for the qualitative approach, a Key Informants Interview was used to collect information because it helps to have a better understanding on the issue and triangulate the findings of the questionnaire. The interviews were intended to provide more robust insight into the trends of sexual behavior, contraceptive use and sex associated risk behaviors strengthen the results of the survey.

Accordingly, the interviewee were selected based on their relation with the areas of focus of the study and access to information. Accordingly, four school directors, four unit leaders, four nurses and four guidance and counselling officers. Therefore, a total of 16 participants have been interviewed. Regarding the sex composition of the interviewees, 9 were male and 7 were female. In addition, 8 of them were from single sex education and the rest from co-education.

The interview has 10 items which are self-developed by the researcher. Since the respondents might not be comfortable to conduct the interview in English, it was conducted in Amharic and responses were later translated to English. The interview took place in the school compounds on the lunch break time of the school. The questions themselves are based on the items of the survey. The intention was to provide a more in depth look of any phenomena that is occurring in either the schooling environment, and potentially explain from a more personal narrative perspective, the answers that were recorded on the survey.

3.4.3. Focused Group Discussion.

The Focused Group Discussion is used to triangulate the findings of the questionnaire. According to Louis Cohen, Lawrence Manion and Keith Morrison (2000) focus groups is useful to triangulate with more traditional forms of interviewing, questionnaire, observation etc.

The Focused Group Discussion was conducted by four groups formed in the four schools from which the participants of the study are selected. Each group contained 10 to 12 participants which sum up to be 32 participants. The discussions were held in a classroom during the lunch breaks. The researcher chaired the discussions by taking facilitator role and introducing the topics/themes of discussion. A total of 12 topics/themes on the three themes sexual behavior, contraceptive use and sex associated risk behaviors were identified based on the items in the questionnaire.

3.5.Procedures

3.5.1. Instrument Validation Procedure.

In the current study, the content validity of the data collection instruments (Questionnaire, Key Informants Interview, and Focused Group Discussion) was established since collecting data by instruments with established validity and good psychometric qualities enables one to obtain valid and reliable data (Wallace, Blake, Parham, & Baldrige, 2003; Mishra & Panda, 2007).

In establishing the content validity of the original English version instruments of data collection both quantitative and qualitative approaches were followed. In so doing, at first a panel consisting of 6 subject matter experts (SMEs) was identified from the fields of psychology, social work and education. The panelists were selected from different institutions (such as Addis Ababa University, University of South Africa (UNISA), and Adama Science and Technology University) based on their expertise, qualification and experiences. All of the SMEs were MA holders (two in Developmental Psychology, one in educational psychology, and one in education). Secondly, a draft copy of the measuring instruments was sent to the panelists to judge the adequacy, appropriateness, and clarity of each item and directions of the instruments.

3.5.2. Instrument Translation Procedure.

All the data collection instruments used in this study were originally prepared in English, and then translated into Amharic by professional translators. Literature suggests that translating data gathering instruments from the source language into the target language makes the participants feel comfortable, on the one hand, and helps the researcher obtain responses of high quality, on the other (Hambleton, 2005).

3.5.3. Scoring Procedure.

The questionnaire used to gather the quantitative data has 23 items. Each of the items have five alternative answers ranging from “Strongly Agree” to “Strongly disagree”. Therefore, each item was coded and scored on the SPSS version 20.

3.5.4. Pilot Testing Procedures.

3.5.4.1. Purpose of the Pilot testing.

A pilot testing was conducted in order to revise and determine the specificity, relevance and clarity of the instruments. That is to say, conducting a pilot study helps to know the reliability of the instrument, since reliability is concerned with the ability of an instrument to measure consistently. Regarding this, Tavakol (2011) described that an instrument cannot be valid unless it is reliable.

3.5.4.2. Procedures and results of reliability.

Hence, the present study was pilot tested to check the reliability of the instrument. Beside this, the pilot testing was conducted to get lessons there by making certain amendments prior to administering the instrument for the main study.

To measure the reliability of the 23 items in the questionnaire, the attitude scale was administered to 40 students who are selected from the sample schools. Then, Cronbach Alpha were computed using SPSS version 20. Accordingly, 0.91 reliability statistics were found to the BSAS scale indicating that the scale has good reliability.

3.5.5. Data Collection Procedure.

Once the participants of the study identified, the researcher approached the schools administrators and explained purpose and design of the research. The Administrators of all schools granted permission to conduct research in the schools, and the unit leaders at both schools granted access to their students. However, it was challenging at times to collect the data in an efficient way, and the intention was to conduct the initial survey with students during their homeroom period. This was due to the reason that homeroom attendance is compulsory, so there was somewhat of a guarantee that the survey would reach the largest number possible within that time period. The questionnaire was distributed by the researcher himself. Filling the questionnaire took approximately about 15-20 minutes.

The interviews were conducted during the school day at a time that was mutually convenient for the students, school administration, and the researcher. The interviews were conducted by the researcher. The interviews were conducted with the students who indicated their willingness to participate after conducting the survey. So, the intention was that interviews would be conducted during the students' break and lunch periods. Four subjects were interviewed from each of the four schools. The questions of the interview were based on the items in the survey making the analysis of the results of the survey more strong.

Similarly, the Focus Group Discussion were conducted during the school day at a time that was mutually convenient for the students, school administration, and the researcher. The Focus Group Discussion was chaired by the researcher. It was conducted with selected students who indicated their willingness to participate after conducting the survey. It was conducted during the students' break and lunch periods. Ten subjects have participated from each of the four schools. The themes/topics of the discussion were based on the research questions.

3.5.6. Data Analysis Procedure.

The data which were collected from the respondents through the attitude scale were analyzed quantitatively. The quantitative component of the data was analyzed by using SPSS 20.0 software, which focuses exclusively on variable based statistical analysis.

For the quantitative approach, the survey data were collected and tabulated the content or items in the attitude scale were analyzed. Frequency counts were used to analyze the demographic characteristics of the participants. Pearson correlation was computed in order to see if there is a relationship between the dependent variables (Sexual Behavior, Contraceptive use and Sex Associated Risks) of the study. In addition, Independent t-test and one-way ANOVA were calculated considering the level of the variables. The intent was to examine whether or not there is a relationship between adolescents' sexual behavior, contraceptive use and sex associated risks as a function of the school type (single-sex or coeducational), grade level, sex and age.

On the qualitative approach, in analyzing the data which were obtained through the Key Informant Interview and Focus Group Discussion, summary of the responses was prepared and the content of the responses were put accordingly. The qualitative interviews and Focus Group Discussion with the students were mainly taken to reveal recurring issues regarding the individual experiences of the students in each environment.

The Classic analytic strategy was used to analyze the data obtained from the Focus Group Discussion. During the transcription of the Focus Group Discussion, first the word for word record of the discussion was written from the audio recording device. Then, everything the moderator said was underlined. Double space and single space was used for the sentences of the participants of the Focus Group Discussion and the moderator respectively. Then, the transcript was coded with numbers and colors in order to identify the source of a speech. Finally the main points of each FGD was summarized and reported.

These responses were analyzed in order to provide more robust insight into the results of the survey and ascertain from the students themselves what effect, if any, the absence or presence of the opposite sex in school has on their sexual behavior. The analysis of the qualitative data is distinct from the quantitative in a way that it was able to provide an authentic reporting of experience from the respondents' own point of view rather than an experience that may align with presented ideas and statements.

3.6. Ethical Considerations

Efforts were made to make the research process professional and ethical. To this end, the researcher tried to clearly inform the respondents about the purpose of the study i.e., mainly for academic. For this purpose, supporting letter from AAU School of Psychology was used. In addition, parental consent was also necessary because most of the participants of the study were minors (below the age 18).

As the issue in focus is one of the sensitive issues in the Ethiopian culture, orientation session for the participants regarding the purpose and confidentiality of the data was provided. As the purpose was introduced in the introduction part of the questionnaire and interview and Focus Group Discussion guide to the respondents, the researcher confirmed that the responses confidentiality are protected. The researcher also does not personalize or brand any of the response of the respondents during data presentations, analysis and interpretation. Furthermore, all the materials which are used for this research are duly acknowledged.

In the process of conducting this study, the researcher had developed an informed consent form that included:

- ✓ An information explaining who the researcher is, including the contact details, along with the purpose of the questionnaire, explaining why they are taking part in the data

collection, what happens if they agree to participate, how long it will take, and how assured the confidentiality will be.

- ✓ A consent form which included statements that the participant has understood what they will be involved in while filling out the questionnaire.

Ethically, all attempts were made to impact the environment as little as possible so as not to disrupt the education of the students.

Chapter 4

Results

The major purpose of this study was to assess the sexual behavior, contraceptive use and sex associated risks of adolescents in single -sex and co-education schools particularly those who are attending in preparatory schools at Addis Ababa. In order to address this purpose, the following research questions were formulated.

RQ 1. How are the sexual behaviors of adolescents perceived in single-sex and co-education setting?

RQ 2. Is there a statistically significant difference in sexual behavior, contraceptive use and sex associated risks by school type, gender and age?

RQ 3. What major factors are perceived to drive adolescents' sexuality?

RQ 4. To what extent do adolescents use contraceptives?

RQ 5. What risk factors are perceived to be associated to adolescents' sexuality?

Thus, in this chapter an attempt will be made to analyze both quantitative and qualitative data to answer these research questions. Generally, the results of the present study were organized and presented in accordance with the major themes of these research questions. Of course, the analyses of quantitative and qualitative data were separately conducted in light of the suggestions given by concurrent triangulation design of the mixed methods research employed in the present study. For the quantitative part, all of the scales yielded interval level data. Hence, the statistical techniques to analyze these data included correlation coefficients, t-test, and univariate ANOVA.

4.1.The Demographic Characteristics of the Participants.

Table 2

Demographic Characteristics of participants of the study(N=296)

| S.No | Variables | Label | Participants | Per cent |
|------|--------------------|------------------|--------------|----------|
| 1 | Sex | Male | 153 | 49 |
| | | Female | 159 | 51 |
| 2 | Age | 16 | 15 | 4.8 |
| | | 17 | 122 | 39.1 |
| | | 18 | 116 | 37.2 |
| | | 19 | 59 | 18.9 |
| 3 | Grade | 11 th | 171 | 54.8 |
| | | 12 th | 141 | 45.2 |
| 4 | School Type | Single sex | 103 | 33.0 |
| | | Coeducation | 209 | 67.0 |
| 5 | Living now with | Father | 15 | 4.8 |
| | | Mother | 57 | 18.3 |
| | | Both | 202 | 64.7 |
| | | Brother/Sister | 8 | 2.6 |
| | | Girl/Boyfriend | 16 | 5.1 |
| | | Other | 14 | 4.5 |

The demographic variables summarized in Table 1 above clearly showed that the participants of the current study can qualify as primary sources of data to fill in the questionnaire. This means that in terms of gender, age category, school type, grade level and whom they are living with there is a reasonable and balanced representation of samples or participants from each of the stratum. Accordingly, the number of male & female participants was 49% and 51% respectively. The majority (39.1%) of participants were found to be at the age of 17 while the least (4.8%) of the participants were found to be at the age of 16. The rest 37.2% and 18.9% were found to be at the age of 18 and 19 respectively. Hence, the result of this study could be more reflective to the age category between 17-19 years old. With regard to grade levels 54.8% of the participants were from grade eleven whereas the remaining 45.2% were from grade 12. It is also depicted in the same table that 67.0% were from

coeducation and 33.0% were from single sex education. In addition to that the majority (64.7%) of the participants live with both their mother and father while the rest 18.3% and 4.8% live with only their mother or their father respectively. Moreover, 2.6% and 5.1% of the participants live with their brother/sister and Boy/Girlfriend respectively. (Other 4.5%)

4.2. Analysis of Qualitative Data

4.2.1. Analysis of FGD

4.2.1.1. Sexual Behavior of Participants

Sexual status of adolescents: the FGD participants were asked a general question about their perceived number or/proportion of adolescents that are sexually active. Many of participants of the FGD generally indicated that from one third to half of their class mates are sexually active. On the other hand, there were also few who believe that even the proportion of adolescents who are sexually active differ by gender. Hence, they have stated that a larger proportion of the boys in the schools tend be sexually active than the proportion of girls who have the same status.

The onset of sexual intercourse in single sex and coeducation: the FGD participants were asked a general question about their perception about age at which most sexually active adolescents have their first sexual intercourse. Many of the participants of the FGD generally indicated that most of those who are sexually active started having sexual intercourse at around 17 years of age.

Driving factors for adolescents to engage in sexual intercourse: the participants of the FGD were also asked about the possible driving factors for adolescents to engage in sexual intercourse. Many participants replied that the major driving factor is peer influence. They explained further by saying once an adolescent is sexually active, he/she shares the experience to their close friends and it becomes a daily topic of discussion for the whole peer group. That encourages the others to participate in similar activities.

Many of the participants of the FGD also mentioned personal need to explore and experiment as another factor that drive adolescents to engage in sexual intercourse. One of the participants reported that:

The many of my friends are sexually active. However, I think the reason they become sexually active is not because of the first one who became active influenced them but because they were all curious about the issue

and wanted to know more about it and wanted to have firsthand experience. I think this curiosity about sexual issues is inside all of us.

There were also a few participants of the FGD who strongly argued that the sexual status of adolescents is also highly influenced by the extent and type of media they attend. They think that media is a key determinant factor for adolescent's sexual initiation. For instance, one participant girl stated that:

Most of us have mobile phone and we usually use it to listen to music and use social media. The privacy we had when we use our mobile phones have given us the chance to use it to watch pornographic pictures and video. Most of us have at least watched movies that have sexual scenes. This is the fact to all adolescents in our school. I think that is a very strong pushing factor for adolescents to engage in sexual intercourse.

Reasons for not engaging in sexual intercourse: the participants of the FGD were also asked a general question about what the reasons that hindered some of them from being sexually active. A few of them generally responded by mentioning some of the reasons for not being sexually active. One of the factors mentioned included the cultural and religious values of the adolescents and their parents. They have stated that there are adolescents who are raised by authoritarian and conservative parents who abstained from sexual intercourse. They added to this point that there is also a difference in the sexual status of girls and boys. The high value attached to virginity in our culture have made more girls to abstain from sexual intercourse.

Sexual activities other than sexual intercourse: many participants' of the FGD responded to the question about the type of sexual activities other than sexual intercourse practiced by adolescents in their school by listing the type sexual activities practiced by the adolescents in their school. Accordingly, they stated that erotic fantasies, kissing and masturbation are very common among adolescents.

4.2.1.2. Contraceptive Use among Participants

Awareness about the different types of contraceptives: the participants of the FGD reported that they know most of the contraceptives. Many of the participants from both school types reported that they have learned about the topic from TV advertisements and

school club activities. On the other hand, there are few participants who argued that they do not have enough knowledge on the issue. For instance, one participant argued that:

Most of the adolescents in my school think they have enough knowledge about the different types of contraceptives. I am sure if that is true even for some of us. What I believe is that most of us know only the most popular types of contraceptives such as: condom and pills. However, there are also other types of contraceptives such as diaphragm, Loop, and so on. This is because clubs educate on the issue only to those who are members of the club; and even Biology teachers are not willing to teach in depth the topic- Reproduction and related topics.

Knowledge about the benefits and side effects of contraceptives: the participants of the FGD also had discussion on the extent to which the adolescents in their school know about the merits and demerits of contraceptives. Many of the participants from both school types have reported in general that they know about the uses of contraceptives which is preventing pregnancy and STDs. They have also noted that they are aware that it can also have the following side effects: unwanted weight gain; long time usage may result in sterilization; skin problems; and some types of contraceptive might fail to prevent pregnancy or STDs.

Accessibility and use of condom: Adolescents' response to the question which focusses on the accessibility of condoms was that many participants from single sex education reported that it can only be accessed from pharmacies which makes it difficult to be used by the adolescents because they are afraid of public criticism. They said that too many unnecessary questions are raised when people hear a youth ask for condom from pharmacies. This is the main reason why some adolescents do not use condoms. But there are also other reasons which make them not use condoms.

Type of contraceptive preferred by adolescents: the discussion revealed that adolescents preferred type of contraceptive is condom. The reason for this is the fact that condom can be easily accessed; it is user friendly and effective to prevent both pregnancy and STDs. The other contraceptive which preferred by many female adolescents is post pill. According to the participants of the FGD many women use post pills.

4.2.1.3. Sex Associated Risks encountered by participants

Vulnerability of adolescents to sex associated risks: the participants of the FDG have been asked if adolescents faced sex associated risks. They have noted that it is common to hear adolescents complain about sex associated risks and most of them are highly vulnerable. They have also added that the reason they face these problems is because most adolescents do not always use contraceptives. In line with this one of the participants stated that:

Though most of us want to explore and experiment sexuality, we do not usually think about the risks associated with it. We do things emotionally and without plan. There are even adolescents who are so irresponsible about their own and their partner's life that they do not use any contraceptives and still have more than one sex partners. Consequently, they end up facing the problems that follow their actions. Their partners who trusted their partner, who have other partners, will also be victims.

Risks perceived to be associated with adolescents Sexuality: in response to the question about the type of risks faced by adolescents the participants of the FGD responded by listing the type of risks. The sex associated risks faced by adolescents are mainly STDs, unwanted pregnancy and abortion. They have mentioned that the most common problem of all is STDs. One of the participant adolescents explained that:

Many adolescents do not use condoms when they have sexual intercourse. It is also not difficult to find adolescents who have more than one sexual partners at a time. Consequently, they will easily be exposed to STDs including HIV/AIDS. I believe that STDs are the first major problem among adolescents. But we also hear girls who have got pregnant and aborted in our school.

Whom do adolescents consult when facing sex associated risks: to this question the participants of the FGD responded by listing some of the people adolescents might consult when faced sex associated risks. The first person they are most likely to tell is usually their close friends. This is because they think that they can understand and not judge them. In support of this idea one of the participants stated that:

It is true that most adolescents prefer to tell to their friends when they face sex associated problems. They might also prefer to tell what they

have faced to a member of their peer who is believed to be more experienced and may have been in the same path.

Secondly, the participants mentioned that many adolescents also consult professionals like health care who work at the school first aid and also government health care centers. They think that their secret is safe with health professionals and guidance counseling officers. It is also very common to search the internet search engines for information about the problems they face.

4.2.2. Analysis of Key Informants Interview

4.2.2.1. Perceived Sexual Behavior of Adolescents

The onset of sexual intercourse: a school nurse from the coeducation school reported that most of those who are sexually active experience their first sexual intercourse at around the age 16 or 17. She further explained that the adolescents come to her when they encounter sex associated problems and one of the questions she ask them is when they have started having sex. She mentioned that there are some adolescents who told her that they have started at earlier age. In line with this, a school guidance and counselling officer in one of the schools confirmed this point by saying that most of the sexually active adolescents initiate sex age for is before the age 17.

Driving factors for adolescents to engage in sexual intercourse: all who have been interviewed agreed that the main driving factors are peer influence, media and economic interests. One of the nurses noted that:

The major driving force is peer pressure. Most adolescents are easily driven peer pressure. It is even more true to the case of sexuality. They may become sexually active just to prove to themselves and others that they are capable of doing what the other members of their peer group have done.

Another interviewee also mentioned that there are adolescents (mainly girls) who are commercial sex workers at night and on the weekends just to generate money to cover their basic needs. She further explained this:

I have come across girls who come to my office because they are exhausted and sick and could not follow their class. They come to office and ask me if they can take a nap in my office. Some of them told me that they have to work on the streets as a commercial sex worker during the night to support their own and their families' life.

Though they do not like what they are doing, they think it is the only way they can survive the poverty they live in.

4.2.2.2. Perceived Contraceptive Use of adolescents

Type of contraceptive preferred by adolescents: the interviewees were about the type of contraceptives adolescents prefer to use. They stated that condom and pills are the most commonly used contraceptives by adolescents. The two contraceptive methods are used by boys and girls respectively.

4.2.2.3. Perceived Sex Associated Risks faced by adolescent

Vulnerability of adolescents to sex associated risks: all of the interviewees were generally asked the degree to which the adolescents in their schools are exposed to sex associated risks. Though it is difficult to clearly state the level of the problem in each school, which is different from school to school, all of the interviewees took the same stand that the adolescents in their schools are vulnerable and a significant number of them have already faced sex associated risks. The degree of the problem seems to be higher in coeducation schools. One of the nurses testified that:

It is very hard to say the problem is high or low but due to lack of awareness and easy access to contraceptive methods; combined with high level of peer pressure, I believe, the adolescents in my school are at risk.

Adolescents' sensitivity to Sex associated Risks: the interviewees noted that some sexually active adolescents do not seem to be aware of the problems they risk facing when engage in unprotected sex. One of the nurses supported this by saying:

As per my experience and exposure they are more sensitive to pregnancy than STDs. The reasons could be if a girl is pregnant, she believes that everything will turn upside down. Hence, to avoid that they may even go to the level of risking their life trying to abort unwanted pregnancy by traditional abortion. Taking post pills is also common among girls. With regard to STDs, I can say that they are highly reluctant.

Sex associated risks faced by adolescents: the participants of the interview stated that the most common type of sex associated risk faced by adolescents is different types of STDs (Gonorrhoea being the most common STD). The other sex associated risks reported include unwanted pregnancy and abortion which are also serious problems.

Whom do they consult when facing sex associated risks: the interviewees agreed on the point that they do not prefer to talk to their parents about the problems they face in association with sex. They are afraid of the consequences and judgment that might come. So, they usually prefer to discuss with their close friends whom they think have better experience or idea on the issue. Secondly, they prefer to talk to profession health care workers (the school nurse). The reason for this might be because they think they can help them get medical attention without their parents knowing about it.

4.3. Analysis of Quantitative Data

4.3.1. The relationship between sexual behavior, contraceptives use and sex associated risk factors

Table 3

Summary of Pearson Correlations between the Predictor and Criterion Variables (N=296)

| N = 296 | SB | CU | SAR |
|---------|----|------|--------|
| SB | | .060 | .443** |
| CU | | | -.049 |
| SAR | | | |

* = $p < 0.05$ (2-tailed), ** = $p < 0.01$ (2-tailed)

To test the hypothesis that the dependent variables significantly relate to one another, Pearson product moment correlation was performed. Results of the correlation analysis provided support for the research hypothesis. Statistically significant negative correlations were obtained between sexual behavior scores and sex associated risk factors scores ($r(294) = -0.443, p < .01$). However, there is not a significant correlation between sexual behavior and contraceptive use ($r(294) = 0.060, p < .05$); and between sex associated risk factors and contraceptives use ($r(294) = 0.049, p < .05$).

4.3.2. Sexual Behaviors, contraceptive use and Sex Associated Risks as a Function of Demographic Variables.

4.3.2.1. Differences in Sexual Behaviors, contraceptive use and Sex Associated Risks by the Gender of Adolescents

Table 4

Independent t-test of Sexual Behaviors, contraceptive use and Sex Associated Risks as a function of the Sex of Adolescents (N=296)

| Dependent variables | Gender | N | Mean | SD | t | P |
|---------------------|--------|-----|--------|--------|-------|------|
| SB | Male | 148 | 3.1932 | .61916 | 3.747 | .000 |
| | Female | 148 | 2.9324 | .57773 | | |
| CU | Male | 148 | 4.2725 | .81468 | -.812 | .417 |
| | Female | 148 | 4.3446 | .70782 | | |
| SAR | Male | 148 | 2.6291 | .73838 | 3.458 | .001 |
| | Female | 148 | 2.2973 | .90373 | | |

It was hypothesized that Sexual Behaviors, contraceptive use and Sex Associated Risks vary as a function of adolescents' gender. An independent t-test was performed to test this prediction. An examination of Levene's test indicated that the assumption for equality of variance was satisfied. Statistically non-significant results were obtained for the Contraceptive Use measures as a function of adolescents sex [$t(296) = -0.812$, $P = .417$]. However, statistically significant results were obtained for Sexual Behavior as a function of age; $t(296) = 3.747$, $P = .000$ and Sex associated risks as a function of age; $t(296) = 3.458$, $P = .001$.

4.3.2.2. Differences in Sexual Behaviors by the school type of Adolescents

Table 5

Independent t-test of Sexual Behaviors, contraceptive use and Sex Associated Risks as a function of Adolescents school type (N=296)

| Dependent variables | School type | N | Mean | SD | T | p |
|---------------------|-------------|-----|--------|--------|--------|------|
| SB | Single sex | 148 | 3.0162 | .57865 | -1.312 | .190 |
| | Coeducation | 148 | 3.1095 | .64199 | | |
| CU | Single sex | 148 | 4.4482 | .56706 | 3.199 | .002 |
| | Coeducation | 148 | 4.1689 | .89805 | | |
| SAR | Single sex | 148 | 2.4142 | .80255 | -1.003 | .317 |
| | Coeducation | 148 | 2.5122 | .87660 | | |

To test the hypothesis that Sexual Behaviors, contraceptive use and Sex Associated Risks as a function of Adolescents school type, an independent t-test was performed. The Levene test indicated that the assumption for equality of variance was satisfied. The results of the t-test only provided partial support for the research hypothesis. Except for the contraceptive use (CU) that revealed significant results [$t(296) = 3.199$, $P = .002$], all the remaining analysis revealed not-significant differences as a function of school type [$t(296) = -1.312$, $P = .190$ for Sexual Behavior; and $t(296) = -1.003$, $P = .317$ for Sex Associated Risks (see Table 10 for means and standard deviations).

4.3.2.2. Differences in Sexual Behaviors by the grade level of Adolescents

Table 6

Independent t-test of Sexual Behaviors, contraceptive use and Sex Associated Risks as a function of Adolescents grade level (N=296)

| Dependent variables | Grade | N | Mean | SD | t | P |
|---------------------|-------|-----|--------|--------|--------|------|
| SB | 11 | 148 | 3.0054 | .67681 | -1.619 | .106 |
| | 12 | 148 | 3.1203 | .53541 | | |
| CU | 11 | 148 | 4.2748 | .84892 | -.762 | .447 |
| | 12 | 148 | 4.3423 | .66661 | | |
| SAR | 11 | 148 | 2.3095 | .79448 | -3.196 | .002 |
| | 12 | 148 | 2.6169 | .85939 | | |

It was hypothesized that Sexual Behaviors, contraceptive use and Sex Associated Risks vary as a function of grade level. An independent t-test was performed to test this prediction. An examination of Levene's test indicated that the assumption for equality of variance was satisfied. Contrary to the present study's hypothesis, statistically non-significant results were obtained for the two variables. The test result showed that measures adolescents' Sexual Behaviors [$t(296) = -1.619, P = .106$; and contraceptive use $t(296) = -.762, P = .447$ showed statistically not significant result. However, statistically significant results were obtained for Sex Associated Risks as a function of age; $t(296) = -3.196, P = .002$. and Sex associated risks as a function of age; $t(296) = 3.458, P = .001$. Thus, the results of the t-test for Sexual Behaviors and contraceptive use vary as a function of grade level did not provide support for the research hypothesis.

4.3.2.3. Differences in Sexual Behaviors, contraceptive use and Sex Associated Risks by the Age of Adolescents

Table 7

Ns, Means, SDs, F values and p values for using differences in Sexual Behaviors, contraceptive use and Sex Associated Risks by age level(N=296)

| Variable | Age | N | Mean | SD | F | P |
|----------|-----|-----|--------|--------|-------|------|
| SB | 16 | 15 | 2.7467 | .73860 | 5.588 | .001 |
| | 17 | 113 | 2.9761 | .69182 | | |
| | 18 | 111 | 3.0640 | .49996 | | |
| | 19 | 57 | 3.3158 | .52975 | | |
| CU | 16 | 15 | 4.2889 | .68853 | 1.585 | .193 |
| | 17 | 113 | 4.2301 | .91404 | | |
| | 18 | 111 | 4.2943 | .66171 | | |
| | 19 | 57 | 4.4971 | .60462 | | |
| SAR | 16 | 15 | 2.1800 | .85122 | 1.922 | .126 |
| | 17 | 113 | 2.3876 | .79441 | | |
| | 18 | 111 | 2.4784 | .84395 | | |
| | 19 | 57 | 2.6579 | .89780 | | |

The study compared Sexual Behaviors, contraceptive use and Sex Associated Risks by age level. A one-way analysis of variance was conducted to test the comparison. The results of the present study provided partial support to the hypothesis. Except for the Sexual Behavior significant results [$F(4, 296) = 5.588, p = .001$], all the remaining analysis revealed not-significant results. The test results of one-way analysis of variance for contraceptive use as a function of the age of adolescents indicated [$F(4, 296) = 1.585, P = .193$] and for Sex Associated Risks [$F(4, 296) = 1.922, P < .05, = .126$]. For the Sexual Behavior (SB), post hoc analysis using LSD showed the existence of significant mean differences between the age 16 and 19; 17 and 19; and 18 and 19. Similarly, for the Contraceptives use, post hoc analysis showed the existence of significant mean differences between the age 17 and 19. In the same way, for Sex associated Risks, post hoc analysis showed the existence of significant mean differences between the age 17 and 19. (see Table 6 for mean differences and standard deviations).

Chapter 5

Discussion

In this section, an attempt will be made to interpret and draw meaning from the major findings of the present study in light of the main themes of the research questions and the existing body of literature reviewed about adolescents' sexual behavior, contraceptive use and sex associated risks in single sex and coeducation.

The objective of the study was to assess the sexual behavior and attitude of adolescents in single sex and co-education schools. The participants of this study were found to be 312 adolescents (159 female, 153 male) within the age range of 16 to 19 years. All the participants were from both preparatory single sex and co-education schools of which 171 were from grade 11 and 141 from grade 12.

5.1. Adolescents' sexual behavior, contraceptives use and sex associated risks

5.1.1. Adolescents' sexual behavior.

Sexual status and Sex initiation of adolescents: The findings of this study revealed that substantial proportion of adolescents are sexually active. Hence, it seems to share the results of a survey by Odimegwa et al, 2002 which reveals that most adolescents are sexually active.

This study also noted that the perceived sex initiation age for those who are sexually active is around 16 or 17. In line with this, a survey conducted on adolescence sexuality in Tanzania showed that more than one third of the participants reported experiencing sexual intercourse with mean age 17.2 years (Madan, 2013). On the contrary, these results of the present study regarding the age at which adolescents' first sexual initiation seems not to confirm the results of Doyle et al., 2012, a research conducted in the sub-Saharan Africa on 14 countries which reported that about 25% of sexually active adolescents reported sex before the age of 15. Another study conducted in the US revealed that the average age for a first sexual intercourse is between 16 and 17 years (Zgourides, 2000).

Sexual activities other than sexual intercourse practiced by adolescents: this study has revealed that Adolescents also take part in different sexual behaviors like sexual fantasies other than sexual intercourse. The sexual behaviors the adolescents in the study practiced included erotic fantasies, kissing and masturbation. These results are in line with a study

conducted on a sample of adolescents which noted that most of them reported experiencing sexual fantasies (Lisa et al., 2003). It is also noted in the same study that masturbation is also considered as a normative behavior. Moreover, stated that adolescents are also involved in ‘making out’ which refers to physical intimacy without sexual intercourse(Houck, C., 2014).

Driving factors for adolescents to engage in sexual intercourse: the findings of the FGD and KII have shown thatthe driving reasons for adolescents to engage in sexual intercourse are peer influence, falling in love and the need to explore and experiment. In line with this, a research conducted by Emebet Tekletsadik, Debebe Shaweno and Deresse Daka (2014) on female students in Aletawondo high school revealed that the main reasons for having sexual intercourse are lack of confidence to refuse, peer pressure, desire to practice sexual intercourse and falling in love to generate income and being forced. Another study conducted by Madan (2013) stated that the main motivation for adolescents to engage in sexual intercourse is found to be curiosity, experimentation and fun.

Reasons for not engaging in sexual intercourse: the results indicated that the major reason that kept adolescents from engaging in sexual intercourse is having strong cultural and religious values. The finding of the study is partially supported by local study that was conducted about determinants of sexual behavior among adolescents in Bishoftu town. It revealed that religiosity has a profound effect on sexual behaviors of adolescents. The odds ratio in this study showed that youth who did not attend religious services were 2.675 times more likely to involve in sexual activity than adolescents of their counter parts (Debebe, 2008). In line with this Marjorie & Kristin (2002)stated that as most religious groups discourage involvement in risky behaviors, premarital sex and dating violence, youth who have no religious affiliation are most likely to initiate sex as teenagers.

5.1.2. Contraceptive use of adolescents

The findings of the FGD and KII have shown many important facts about the knowledge and use of contraceptives among adolescents. It has also indicated adolescents preferred type of contraceptive.

Awareness about contraceptives: the findings of the study indicated that adolescents have limited awareness about contraceptives. It is believed that adolescents know only about condoms and pills but they do not have enough information about the other types of contraceptives. In line with this a research conducted by Miz-Hasab research center revealed

that three in four youth know of at least one contraceptive method (Kidanu & Banteyirga, 2002). In addition to that those who use contraceptives at early age were also reported to use a less reliable method such as withdrawal, which may raise from lack of awareness (MOLSA, 1991). On the contrary, another study conducted in Ethiopia revealed a result contrary to the current study. It stated that of the sexually active adolescents there were only 68.8% who had knowledge about contraception and the rest (31.2%) lacked knowledge about any of the contraception methods (Zemed, 2002).

Adolescents Preferred type of contraceptives: the findings of the FGD and KII showed that most adolescents use only few of the contraceptives that are available. Accordingly, the most preferred types of contraceptives are found to be condom and pills. While condoms are very popular in boys the later (especially post pill) is popular among girls. Studies in Ethiopia also indicated that from 17.8% to 21.5% of the adolescents are sexually active and only about 40% of the sexually active adolescents reported consistent use of condom (Berhanu & Haidar, 2009).

Use of condom: the study revealed that though condom is the most used type of contraceptive by adolescents. These result seems to support somehow to the report of CDC (2018) which reported that most adolescents do not use a condom during sexual intercourse. In line with this, US statistics as cited in Zgourides (2000) also underlined that adolescents do not consistently take precautions against sexually transmitted diseases.

5.1.3. Sex Associated Risks faced by Adolescents

The results of both the FGD and KII have confirmed the existence and type of sex associated risks faced by adolescents. In addition, the study has also shown whom they prefer to consult when they face sex associated risks.

Adolescents sensitivity and vulnerability to sex associated risks: the results of both the FGD and KII showed that many adolescents are concerned about pregnancy particularly sexually active girls. However, they do not worry about STDs. The results have also confirmed that the adolescents in the single sex and coeducation are exposed to sex associated risks because of lack of awareness about contraceptives, accessibility of contraceptives and engagement in commercial sex. The adolescents low level of alert about sex associated risks have made some of them experience the risks. According to the results of the FGD and KII, the most commonly seen problems are STDs, followed by unwanted

pregnancy and abortion. In support of these results, a cross sectional school based study by Teklestsadik et al. (2014) revealed that, the main sex related risk faced by adolescents is unwanted pregnancy where except for one fifth all of them resulted in induced abortion. In addition to that, the same study also confirmed that they many adolescents had symptoms of sexually transmitted diseases. Another study conducted by Stankovic et al., 2009, stated that two out of twenty-five adolescents reported having abortion and one out of twenty adolescent reported being raped or forced to participate in non-consensual sex with a regular partner in an ongoing relationship. Similarly, the present study finding supports the results of MOH, 2006; which pointed out that unsafe sexual activity among Ethiopian youth particularly those residing in urban areas, has resulted in large number of unwanted pregnancies and unsafe abortions, which pose serious health and social problems. The studies further concurred that the number of cases of sexually transmitted diseases including HIV/AIDS is also increasing.

Whom do adolescents consult when facing sex associated risks: After facing sex associated problems, it is reported that the adolescents usually do not prefer to inform their parents about the problem. The results of the study revealed that they prefer to consult their friends and professionals such as the school nurses. These results partially reside with a study conducted in Pune showed that male adolescents consult their worrisome issues to in a descending frequency starting from friends, parents, doctors, elder brother, other relatives, teachers and elder sister. Whereas, female adolescents consult worrisome issues in a descending frequency starting from their parents, elder sister, friends, health professionals, other relatives, teachers and elder brother (Anand & Shanta, n.d.). The reason the adolescents in this study do not prefer to consult their parents may have resulted from the cultural differences in parenting style and values of the society regarding having sexual intercourse during adolescence.

In the contrary to the results of WHO (2011) that states various research in many settings found that many adolescents first seek for self-treatment or some non-professional service (local healers, patent medicine sellers, etc.) and only later turn to professional health services in the case of STIs. It is also noted that adolescents typically report that their peers are their main source of information about sexuality related problems. Teachers, adult family members, siblings and television and other media are also reported as sources of information. Preferred sources of information for older adolescents were sisters-in-law, elder sisters, cousins, peers and community field workers.

5.2. Sexual behavior, contraceptive use and sex associated risks as a function of demographic characteristics

The current study reveals several important findings about the relationship among Sexual behavior, contraceptive use and sex associated risks as a function of demographic characteristics.

5.2.1. Sexual behavior, contraceptive use and sex associated risks as a function of school type

The findings of the current study provided evidence on the relationship between Sexual behavior, contraceptive use and sex associated risks as a function of school type. It was found that there is a statistically significant relationship between contraceptive use and school type. However, this does not hold true for the remaining variables (sexual behavior and sex associated risks) which do not have significant differences as a function of school type.

In the contrary to this result, some scholars underline the positive outcomes of the setting on adolescents' sexual behavior (Nick, 2018; Chitra, 2019)). Moreover, the postponements of romantic relationship among the single-sex education adolescents has been reported to minimize the risk early sexual initiation and teenage pregnancy (Sullivan, 2012).

In line with the result of this study, a research conducted by revealed that though co-education setting creates an environment that resembles to the real world that helps the adolescents to practice and develop social and cross gender interactions it has also an adverse effect on their sexuality which leads to an early sexual experimentation (Nick, 2018; Chitra, 2019).

Generally speaking, the present study findings revealed that differences were observed among single sex and co-education adolescents in regard to their sexual initiation. Following that it can be seen that adolescents from single sex schools tend to delay sexual initiation compared to their counterparts from co-education.

5.2.2. Sexual behavior, contraceptive use and sex associated risks as a function of gender

It was hypothesized that Sexual Behaviors, contraceptive use and Sex Associated Risks vary as a function of adolescents' gender. The results partially supported the hypothesis as there was found to be statistically significant relationship for. Contrary to the present

study's hypothesis, statistically non-significant results were obtained for the contraceptive use measures as a function of adolescents' gender.

Hence, the present study seems to go in line with the qualitative study conducted by Gillmore et al., (2002) which focuses on the influence of gender on sexual behavior and it appears that at older ages, 16 to 17 years, boys and girls are equally likely to engage in sex. However, boys are more likely than girls to have sex at an early age (Nahom, D., Wells, E., Gillmore, M.R., Hoppe, M., Morrison, D.M., Archibald, M., Murowhick, E., Wilsdon, A., and Graham, L., 2001). Similarly, the findings of the present study seem to confirm with the results of a study by Petersen & Hyde, (2010) which pointed out that compared with girls, boys were more likely to have ever had sexual intercourse and have first intercourse at a younger age, although the gender differences were small.

On the contrary, another study by Solomon (2004) pointed out that gender did not significantly predict the odds of adolescents' sexual behavior. Debebe (2008) on his part confirmed that gender and adolescents' sexual activity were not correlated.

5.2.3. Sexual behavior, contraceptive use and sex associated risks as a function of grade level

It was hypothesized that Sexual Behaviors, contraceptive use and Sex Associated Risks vary as a function of grade level. Contrary to the present study's hypothesis, the test result showed that Sexual Behaviors and contraceptive use do not have a statistically significant relationship with grade level. However, statistically significant results were obtained for Sex Associated Risks as a function of grade level.

A study conducted to assess the Risky Sexual Practice and Associated Factors among 836 High School students in Addis Ababa revealed that student's grade have statically significant association with risk sexual practice. Those students who were grade nine were more likely to have risky sexual practice as compared with grade 12 students (AlmazGizaw, Dube Jara and Kassahun Ketema (2014)) (Almaz et al., 2014).

5.2.4. Sexual behavior, contraceptive use and sex associated risks as a function of age

The study has also compared Sexual Behaviors, contraceptive use and Sex Associated Risks by age level. The results of the present study provided partial support to the hypothesis. It was found that Sexual Behavior has a relationship with age of adolescents. However, the

remaining two variables (contraceptive use and sex associated risks) do not have a relationship with the adolescents age. Sexual Behavior has shown significant mean differences between the ages 16 and 19; 17 and 19; and 18 and 19. Similarly, for the Contraceptives use has shown the existence of significant mean differences between the ages 17 and 19. In the same way, for Sex associated Risks, significant mean differences has been observed between the age 17 and 19.

These findings seem to confirm with the other studies which show a positive relation between age and sexual activity which says experienced youth were older than the inexperienced youth across genders (Debebe, 2008; Abdulhakim, 2008).

5.3.Relationship among Sexual behavior, contraceptive use and sex associated risks

The relationship among the dependent variables was checked using Pearson Correlation coefficient. The results provided partial support for the research hypothesis. A negative correlation was obtained between sexual behavior scores and sex associated risk factors scores. However, there is not a significant correlation between sexual behavior and contraceptive use and between sex associated risk factors and contraceptives use.

Chapter Six

Summary, Conclusions and Recommendations

6.1. Summary

First, a substantial proportion of adolescents are sexually active in high schools with co-education having a greater number than adolescents attending single-sex schools. It can also be concluded that most of the adolescents who are sexually active initiated their first sexual intercourse before the age of 16 or 17. The main driving forces for adolescents to engage in sex are peer pressure, falling in love and the need to explore and experiment. Those who managed to abstain from sexual intercourse are believed to have stronger cultural and religious backgrounds. Adolescents also take part in sexual activities other than sexual intercourse. This includes: erotic fantasies, kissing and masturbation.

Second, adolescents in preparatory high schools do not have awareness about the different types of contraceptives. Those who are sexually active do not use condom and other contraceptives consistently. Fear of public criticism, most adolescents in both single sex and co-education schools prefer condom as a means of contraceptive.

Third, it was found that STDs, unwanted pregnancy and abortion are the major sex associated problems faced by adolescents.

Fourth, regarding the relationship between the dependent and independent variables of the study, contraceptives use and school type (single sex and coeducation) have relationship. The sexual behavior and sex associated risks have relationship with gender of adolescents. There is also a relationship between sexual behavior and the age of adolescents.

Fifth, with regard to the relationship between the dependent variables of the study, it was found that there is a negative correlation between sexual behavior scores and sex associated risk factors scores. However, there is no correlations between sexual behavior and contraceptive use and between sex associated risk factors and contraceptives use.

6.2. Conclusion

The study assessed adolescents' sexual behavior, contraceptive use and sex associated risks in single-sex and coeducation school settings. In order to address this purpose the following research questions were formulated.

RQ 1. How are the sexual behaviors of adolescents perceived in single-sex and co-education setting?

RQ 2. Is there a statistically significant difference in sexual behavior, contraceptive use and sex associated risks by school type, gender and age?

RQ 3. What major factors are perceived to drive adolescents' sexuality?

RQ 4. To what extent do adolescents use contraceptives?

RQ 5. What risk factors are perceived to be associated to adolescents' sexuality?

In light of these purposes of the study and discussion of the results made above, the researcher draws the following conclusions.

First, a noticeable number of adolescents are believed to be sexually active in high schools with the chances of being sexually active increased in co-education than the adolescents attending single-sex schools. This implies that the nature of the school setting has directly or indirectly affected the sexual status of adolescents. It was also found that nearly half of the adolescents who are sexually active initiated their first sexual intercourse before the age of 16 or 17. This shows that the age for sexual initiation has decreased. The main driving forces for adolescents to engage in sex are peer pressure, falling in love and the need to explore and experiment.

Second, adolescents in preparatory high schools do not believe they have awareness about the different types of contraceptives. Those who are sexually active do not use condom and other contraceptives consistently. This means despite the fact that adolescents age of sexual initiation is decreasing from time to time, the efforts made to increase adolescents' awareness on the use of contraceptives has not been fruitful.

Third, it can also be concluded that STDs, unwanted pregnancy and abortion are the major sex associated problems faced by adolescents. This could be a direct result of the adolescents' trend on using contraceptives. It also may indicate that the accessibility of condom is in question.

Fourth, regarding the relationship between the dependent and independent variables of the study, contraceptives use and school type (single sex and coeducation) have relationship. The results of the study have shown that the tendency of being sexually active increases in coeducation when compared to single-sex education schools. As those that are not sexually active do not have the need to use contraceptives, the relationship between school type and contraceptives use may result from the relationship between the sexual state of the adolescents and their use of contraceptives. On the other hand, the sexual behavior and sex associated risks have relationship with gender of adolescents. There is also a relationship between sexual behavior and the age of adolescents. This means that the gender and age of adolescents are determinant factors for sexual behavior and sex associated risks of adolescents.

Fifth, with regard to the relationship between the dependent variables of the study, it can be concluded that there is a negative correlation between sexual behavior scores and sex associated risk factors scores. This shows that there is an inverse relationship between sexual behavior and sex associated risk of adolescents. As one increases the other decreases. However, there is no correlations between sexual behavior and contraceptive use and between sex associated risk factors and contraceptives use.

6.3. Recommendations

Schools play a vital role in shaping the behavior of adolescents and creating a healthy and all rounded citizens. However, as this study reveals, some young people are at risk of being vulnerable to different sexually transmitted diseases which can be related to their sexual behavior and attitude. Thus, based on the conclusions made from the results, the following recommendations are forwarded:

- It is also recommended that the schools system in general should give a serious attention to adolescents' reproductive health education. School administrators, teachers should plan organize and implement consistent awareness creation programs on Sexual and Reproductive Health for adolescents.
- Measures must be taken to set policies and laws to promote school based comprehensive sexuality education including Sexual and Reproductive Health and information regarding access to Sexual and Reproductive Health Services.

- Contraceptives like condoms should be free and easily available around both single sex and coeducation schools.
- Parents should work on education on sexual abstinence and safe sexual life education by building good parent-child relation that will play great role in minimizing and prevent sex-associated risks.
- Generally, since the present study is the a baseline work on this issue in Ethiopia, at least to the knowledge of the researcher, different personalities can use it as a stepping stone to conduct further research in this areaso as to provide data to policy makers and all stakeholders in the education sector. Researchers should conduct further large scale and comparative studies to see the impact of school types on adolescents' sexual behavior, contraceptives use and sex associated risks.

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Appendix B

Brief Sexual Attitudes Scale

Listed below are several statements that reflect different attitudes about sex. For each statement fill in the response on the answer sheet that indicates how much you agree or disagree with that statement. Some of the items refer to a specific sexual relationship, while others refer to general attitudes and beliefs about sex. Whenever possible, answer the questions with your current partner in mind. If you are not currently dating anyone, answer the questions with your most recent partner in mind. If you have never had a sexual relationship, answer in terms of what you think your responses would most likely be.

N:B Please, give your level of agreement by putting a tick “✓” mark in the boxes of the alternative responses.

| No | | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|----|--|----------------|-------|---------|----------|-------------------|
| 1 | I do not need to be committed to a person to have sex with him/her | | | | | |
| 2 | Casual sex is acceptable. | | | | | |
| 3 | I would like to have sex with many partners. | | | | | |
| 4 | One-night stands are sometimes very enjoyable. | | | | | |
| 5 | It is okay to have ongoing sexual relationships with more than one person at a time. | | | | | |
| 6 | Sex as a simple exchange of favors is okay if both people agree to it. | | | | | |
| 7 | The best sex is with no strings attached. | | | | | |
| 8 | Life would have fewer problems if people could have sex more freely. | | | | | |
| 9 | It is possible to enjoy sex with a person and not like that person very much | | | | | |
| 10 | It is okay for sex to be just good physical release | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| 11 | Birth control is part of responsible sexuality | | | | | |
| 12 | A woman should share responsibility for birth control. | | | | | |
| 13 | A man should share responsibility for birth control. | | | | | |
| 14 | Sex is the closest form of communication between two people. | | | | | |
| 15 | A sexual encounter between two people deeply in love is the ultimate human interaction. | | | | | |
| 16 | At its best, sex seems to be the merging of two souls | | | | | |
| 17 | Sex is a very important part of life. | | | | | |
| 18 | Sex is usually an intensive, almost overwhelming experience. | | | | | |
| 19 | Sex is best when you let yourself go and focus on your own pleasure. | | | | | |
| 20 | Sex is primarily the taking of pleasure from another person. | | | | | |
| 21 | The main purpose of sex is to enjoy oneself. | | | | | |
| 22 | Sex is primarily physical. | | | | | |
| 23 | Sex is primarily a bodily function, like eating. | | | | | |

Appendix C

Focus Group Discussion Guide

1. What proportion of adolescents of your age do you think are sexually active?
2. At what age would you say adolescents start having sex?
3. What are the reasons for adolescents to engage in sex?
4. To what extent do you think that adolescents of your age take risks of any sort during sex?
5. Do boys and girls take the same or different risks?
6. Are adolescents more worried / concerned about pregnancy or HIV/AIDS and other STIs?
7. Whom do adolescents consult when they encountered sex associated risks?
8. What do adolescents think about contraceptives?
 - What are their advantages and disadvantages?
 - Should men/women carry them around?
9. Where do adolescents generally obtain their condoms from?
10. Which type of contraceptive do adolescents prefer to use? Why?

Appendix D

Key Informants Interview

1. At what age would you say adolescents in this school start having sex?
2. What are the reasons for adolescents in this school to engage or not to engage in sexual intercourse?
3. To what extent do you think that adolescents in this school take risks of any sort during sex?
4. Do boys and girls take the same or different risks?
5. Are adolescents in this school more worried / concerned about pregnancy or HIV/AIDS and other STIs?
6. Whom do adolescents consult when they encountered sex associated risks?
7. What do adolescents in this school think about contraceptives?
 - What are their advantages and disadvantages?
 - Should men/women carry them around?
8. Which type of contraceptives do adolescents prefer to use? Why?

Appendix F

The Translated Amharic Version of the KII

የቃለ-መጠይቅ ጥያቄዎች

1. በዚህ ት/ቤት ያሉ ወጣቶች በስንት ዓመታቸው የግብረ-ስጋ ግንኙነት የሚጀምሩ ይመስልሃል/ሻል?
2. የግብረ-ስጋ ግንኙነት እንዲፈፀሙ የሚያደርጓቸው ምክንያቶች ምን ምን ናቸው?
3. በዚህ ት/ቤት ያሉ ወጣቶች በግብረ-ስጋ ግንኙነት ምክንያት ለሚፈጠሩ ችግሮች ምን ያህል ተጋላጭ ናቸው ብለህ/ሽ ታስባለህ/ቢያለሽ?
4. ከወንዶችና ሴቶች በግብረ-ስጋ ግንኙነት ምክንያት ለሚፈጠሩ ችግሮች የበለጠ ተጋላጭ የሚሆነው ማነው ብለህ/ሽ ታስባለህ/ቢያለሽ?
5. በዚህ ት/ቤት ያሉ ወጣቶች ላልተፈለገ እርግዝናና ስለ አባላዘር በሽታዎች ይጨነቃሉ/ያስባሉ ብለህ/ሽ ታስባለህ/ቢያለሽ?
6. ከግብረ-ስጋ ግንኙነት ጋር የተያያዙ ችግሮች ሲያጋጥሟቸው የሚያማክሩት ምንን ነው?
7. በዚህ ት/ቤት ያሉ ወጣቶች ስለ ወሊድ መቆጣጠሪያ ዘዴዎች ያላቸው ግንዛቤ ምን ይመስላል?
ጥቅምና ጉዳቱን በተመለከተ
ማን ነው መያዝ ያለበት የሚለውን በተመለከተ
8. በዚህ ት/ቤት ያሉ ወጣቶች የትኛውን የወሊድ መቆጣጠሪያ ዘዴ ይመርጣሉ ለምን?

Addis Ababa University
School of Psychology
Informed Consent Forms

Dear Parent and Informants,

This study is on:. The purpose of this research project is to explore the sexual behavior, contraceptives use and sex associated risk factors of adolescents.

This informed consent form will give you the basic idea of what the research is about and what your participation will involve. Please take the time to read this form carefully and to understand any accompanying information.

As part of my study, I am asking you to participate in this research study by completing a Questionnaire survey or as informants of FGD, or Interview. My goal is to analyze the materials from the focus group discussion, interview and questionnaire in order to understand the participants' views about sexual behavior, contraceptives use and sex associated risk factors of adolescents. If all the participants agree, the discussions and interview will be audiotaped and later transcribed by the researcher. Transcripts will be typed with codes and pseudonyms.

You may withdraw your consents if you feel you are inconvenient at any time. In signing this form, you are agreeing to participate in this study. I would be most happy to answer any questions you might have. Please write or call.

Here is my:

- ✓ telephone number : +251911415372
- ✓ e-mail address: rezeye@gmail.com

Thank you in advance,

Rezene G/Sellassie
Researcher

I, _____, have read the above statement and agree to participate in this study as an informant.

Signature of participant

Date

Parental/legal guardian consent (*only for informants below the age 18*)


I, _____, the parent/ legal guardian of the informant have read the above statement and given permission to my child to participate in this study as an informant.

Signature of participant Date

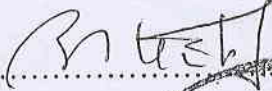
Assurance of the school's Consent Message

The undersigned agree to accept responsibility for scientific, ethical and technical conduct of the research project in our school entitled as 'Sexual Behavior and Attitude towards Sexual Behavior of Single-sex and Co-education adolescents'.

Name of the candidate- Rezene Gebresilassie

Date May, 21, 2014signature..... 

Approval of the School Consent Message

Director/Co-coordinator Br. Betre Fissehasignature..... date June 17, 2014



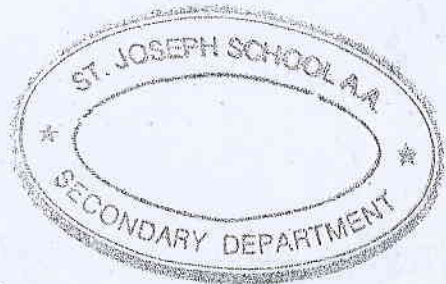
Assurance of the schools Consent Message

The undersigned agree to accept responsibility for scientific, ethical and technical conduct of the research project in our school entitled as 'Sexual Behavior and Attitude towards Sexual Behavior of Single-sex and Co-education Adolescents in Addis Ababa'.

Name of the Candidate -RezeneGebresilassieGiday

Date.....signature.....

Approval of the School Consent Message



Director/Co-ordinator ... *Yonas*signature *[Signature]*date *May 23, '16*

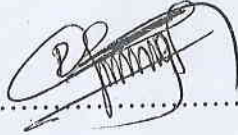
Assurance of the school's Consent Message

The undersigned agree to accept responsibility for scientific, ethical and technical
conduct of the research project in our school entitled as 'Sexual Behavior and Attitude towards
Sexual Behavior of Single-sex and Co-education adolescents'.

Name of the candidate- Rezene Gebresilassie

Date. May 23, 2014

signature.....



Approval of the School Consent Message

Director/Co-coordinator Wondim

signature.....



date

May 23, 2014

