

***The Effect of Living Arrangements and Parental Attachment on
Sexual Risk behaviors and Psychosocial Problems of Adolescents in
Dessie Preparatory School, Ethiopia***

By

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List of Abbreviations

STD = Sexually Transmitted Diseases

STI = Sexually Transmitted Infections

HIV= Human Immunodeficiency Virus

MTCT=Pregnant Mother-To-Child Transmission of HIV infection

PTC=Parent-Teen Connectedness

OR= Odds Ratio

CI= (95%) Confidence Interval

FGD=Focus Group Discussion

Abstract

The family environment is critical in supporting healthy adolescent development. Following the opening of technical and preparatory schools in Ethiopia, it has become necessary for students particularly of the rural areas to move to the nearby towns for the duration of their training. However, whether adolescents who come from rural areas (who might lack consistent adult supervision and exposed to a relatively new environment) are having an elevated sexual-risk taking behavior and more psychosocial problems remain unanswered.

In an attempt to respond to questions posed on these differential vulnerabilities of adolescents, a comparative cross-sectional study that examined the effect of living arrangement and parent-teen connectedness on sexual risk behaviors and psychosocial problems of students was conducted in Dessie preparatory school, Ethiopia. A sample of 667 students (512 male and 155 female) completed a pre-tested structured anonymous questionnaire. Qualitative information was obtained from four focus group discussions and sixteen peer-to-peer interviews segregated by gender and residence.

We found that living with friends (OR=2.77; 95%CI=1.47, 5.24), alcohol consumption (OR=1.94; 95%CI =1.24, 3.04), lower perceived family connectedness (OR=0.97; 95%CI=0.95, 0.99) and parental monitoring (OR=1.70; 95%CI=1.06, 2.73), older age (OR=4.37; 95%CI=2.11, 9.04), having peer pressure (OR=1.82; 95%CI=1.20, 2.77) and peers who are sexually experienced were associated with increased odds of sexual activity.

Having a depressive symptom was associated with female gender (OR=1.96; 95%CI=1.18, 3.23), lower family connectedness (OR=0.96; 95%CI=0.94, 0.99), lower grade-point-average (OR=1.93; 95%CI=1.01, 3.71), and living with friends (OR=3.16; 95%CI=1.66, 5.00), relatives (OR=2.52; 95%CI=1.28, 4.95) or alone (OR=2.15; 95%CI=1.04, 4.46).

The study revealed that suicide attempt in the past 12 months was linked to having a history of suicide attempt in the family (OR=2.59; 95%CI=1.09, 6.15) or among friends (OR=4.32; 95%CI=1.88, 9.94), female gender (OR=2.60; 95%CI=1.05, 6.48) and sexual activity (OR=3.00; 95%CI=1.27, 7.11).

The overall research findings indicate that living with both biological parents and good parent-teen connectedness are related to better psychosocial health and being sexually abstinent.

The evidence from this study suggests that parents need to know the continued importance of having good relationships with their adolescents. Youth programs should also address the central role of familial influences (specifically high levels of parental connectedness and monitoring) in protecting boys and girls from unsafe sexual behavior and psychosocial problems. Additional research needs to explore the impact of familial influences on adolescent reproductive and psychosocial health and preferably use longitudinal designs to determine the stability of the observed association over time.

Key words: Adolescents, living Arrangements, parental attachment, sexual risk behaviors
psychosocial problems, Ethiopia.

1. Back ground Review and statement of the problem

At the beginning of the new millennium, about 1.7 billion people —more than a quarter of the world's population—were between the ages of 10 and 24, 86 percent living in less developed countries ^{1,2}. These teenagers are tomorrow's parents. The reproductive and sexual health decisions these young people make today will affect the health and well being of their countries and of their world for decades to come.

Despite their numbers, adolescents have not traditionally been considered a health priority since they have lower morbidity and mortality than older and younger age groups. Nonetheless, in some areas such as mental and sexual health, adolescents suffer disproportionately ³.

In particular, two international issues have a profound impact on young people's lives: family planning and HIV/AIDS. Teenage women are twice as likely to die from pregnancy-related health complications as are women in their twenties. Current statistics on HIV/AIDS indicate that one-half of all new HIV infections worldwide occur among young people ages 15 to 24. Every minute, five young people worldwide become infected with HIV/AIDS. This is over 7,000 young people each day. The socioeconomic and political consequences of the HIV epidemic place these youth at further risk as the infrastructure in their countries comes under enormous strain ⁴.

For young people 15-24 years old, suicide is the third leading cause of death, behind unintentional injury and homicide. In 1996, more teenagers and young adults died of suicide than

from cancer, heart disease, AIDS, birth defects, stroke, pneumonia and influenza, and chronic lung diseases combined ⁵. Many of the basic risk factors for adolescent suicidality are well known; among these, the most important are depression, ⁶⁻⁹ exposure to suicide or suicide attempt by family or friends, ^{10, 11} substance or alcohol abuse¹², and having guns in the home ^{6, 13, 14}.

Although difficult and painful at times, the consolidation of identity and clarification of values assist adolescents in regulating their behavior independently of others around them. In their attempts to differentiate their own beliefs and values from others, many adolescents experiment with risk behaviors in the areas of substance use and abuse, sex, and delinquency ¹⁵⁻¹⁸.

Moreover, the stressful process of differentiation and identity consolidation can result in significant psychological distress. Compared to adults, adolescents show higher stress levels and fewer coping resources. Intimacy with parents, parental support, and guidance are significant determinants of adolescent adjustment. Recent findings indicate that, parental warmth/involvement, psychological autonomy-granting, and behavioral control/monitoring, are associated with security of attachment in late childhood and early adolescence and contribute to good psychosocial, academic and behavioral adjustment ^{19, 20}. In general adolescents are less influenced by peers and more influenced by their parents in fundamental values such as academic goals, religious beliefs and morality ^{21, 22}.

There has been a marked change in the causes of morbidity among adolescents ²³. Many adolescents today, and perhaps increasing numbers for the years to come, are at risk for adverse

health outcomes stemming from their behaviors. Contemporary threats to adolescent health are primarily the consequences of risk behaviors and related outcomes such as risky sexual behavior, substance use, STD/HIV, teen pregnancy, and violence to name a few ^{24, 25}. Although a myriad of diverse factors associated with risk behaviors have been identified, there is emerging interest in understanding the impact of familial environment on adolescents' adoption and maintenance of health compromising and protective behaviors ²⁶.

Parent-teen relationships and adolescent health

Parent-teen interactions can affect adolescents' behavior over and above the influence of socioeconomic and demographic factors, such as income, family structure and parent education ²⁷. The familial environment is not a unitary dimension. Rather it is a multidimensional construct comprised of heterogeneous psychological and social factors. Factors such as family connectedness, ^{6, 28} parent-teen communication, ^{29, 30} parental monitoring, ³¹ and parental modeling, ^{26, 32} have been identified as influencing adolescents' health behavior and psychosocial health.

Parental monitoring

There is no uniform definition of parental monitoring. However, there seems to be consensus that 2 important aspects of parental monitoring are adolescents' perception of their parents' knowledge about whom they are with and where they are spending their time when they are not at home or attending school ^{30, 33-35}. Less perceived parental monitoring has been associated with more sexual-risk taking ^{35, 36, 37} and more frequent substance use ^{34, 38-40}.

Family connectedness

The concept of parent-teen connectedness overlaps considerably with that of attachment.

In essence parent-teen connectedness is characterized by the quality of the emotional bond between parent and child and by the degree to which this bond is both mutual and sustained over time. When parent-teen connectedness is high in a family, the ‘emotional climate’ is one of affection, warmth, satisfaction, trust, and minimal conflict. Parents who share a high degree of connectedness enjoy spending time together, communicate freely and openly, support and respect one another, share similar values, and have a sense of optimism about the future.

Parent-teen connectedness has been linked to a wide variety of outcomes including personal traits (self confidence, coping skills, motivation, overall wellbeing), mental health (depression, suicide, adjustment, identity), specific risk behaviors (violence, drugs and alcohol use, tobacco use, unprotected sex), pregnancy, HIV/STI infection, conduct disorders (aggression, delinquency), school achievement or performance, and social skills (including the quality and stability of peer and intimate relationships).⁴¹

Parent-teen communication

In sub-Saharan Africa, as in other regions of the world, a culture of silence surrounds most reproductive health issues. Many adults are uncomfortable talking about sexuality with their children. Others lack accurate sexual health knowledge ⁴². Many Africans feel unable to discuss across perceived barriers of gender and age differences ⁴³. Approximately 30 studies on parent-child communication about sexuality reviewed by Miller revealed mixed results, as others have ⁴⁴ –mixed results meaning that parent-child communication about sexuality leads to a delay in

sexual onset or use of contraception in some families, but in other families communication about sexuality doesn't appear to have any effect on sexual onset or contraception use. Miller and others have suggested explanations for these mixed results, including the timing, quality, content, triggers, and values associated with various communications ⁴⁵.

A patterned vulnerability

Epidemiological studies across the developing world show that young people are not equally affected by HIV/AIDS. Rather, those who are most socially and economically disadvantaged are at highest risk⁴⁶. The risk of HIV infection for young people in developing countries is increased by socio-cultural, political and economic forces such as poverty, migration, war and civil disturbance⁴⁷. Young people may also face the increased risks of HIV infection by virtue of their social position, unequal life chances, rigid and stereotypical gender roles, and poor access to education and health services.

Young people at heightened risk of becoming infected with HIV include those who live in abject poverty, those who are denied regular or appropriate adult support, and they are stigmatized and discriminated against. Young people who are marginalized in these ways are more vulnerable to rape and coercive sex, may be forced to exchange sex in order to meet their needs for food and shelter and are routinely denied access to education, accurate information and health services.

Major changes over the last few decades have affected the sexual and reproductive health of young people in developing countries. Rapid urbanization and rural-urban migration has meant that greater numbers of young people are living in precarious and impoverished conditions. Traditional, multi-generational extended families have been increasingly replaced by nuclear

families, lone-parent families and, in some cases, the complete absence of parents ⁴⁸. There are increasing pressures on young people to be sexually active and, in the case of boys, to have had several different partners ⁴⁹. A recent study among Cameroonian adolescents also showed that young people who lived with their brother, sister or with one parent were significantly more likely to be sexually active as compared to those who lived with both parents ⁵⁰.

In both developed and developing countries, there are a number of obstacles which make it difficult for young people to protect their sexual and reproductive health. Social, cultural, and economic factors also greatly influence young people's ability to protect themselves from unwanted pregnancy and sexually transmitted infections (STIs), including HIV. Mass media, migration and/or urbanization may increase both the desire and opportunity for sexual activity, and many youth feel strong peer group pressure to engage in sexual intercourse ⁵¹. Some cultures may promote early sexual intercourse by expecting women to marry and begin childbearing at an early age ⁵².

Young people often have less access to information, services and resources than those who are older ^{1,49}. Health services are rarely designed specifically to meet their needs, and health workers only occasionally receive specialist training in issues pertinent to adolescent sexual health ^{1,52}. It is perhaps not surprising therefore that there are particularly low levels of health seeking behaviour among young people ⁴⁸. Similarly, young people in a variety of contexts have reported that access to contraception and condoms is difficult ⁵³.

Experts estimate that half a million African youth, ages 15 to 24, will die from AIDS by the year 2005 ⁵². In African countries with long, severe epidemics, half of all infected people acquire HIV infection before their 25th birthday and die by the time they turn 35 ⁵⁴.

Previous researches indicate that young people who live with their parents are less likely to have emotional problems, and that their behavior is more likely to be under their parents' control ⁵⁵.

Secure attachment during adolescence is related to fewer mental health problems, including lower levels of depression, anxiety and feelings of personal inadequacy ⁵⁶⁻⁶⁰. Securely attached adolescents are less likely to engage in substance abuse, antisocial and aggressive behaviour, and risky sexual activity ^{57, 61-64}. Securely attached adolescents also manage the transition to high school more successfully, and enjoy more positive relationships with family and peers ^{65, 66}. They demonstrate less concern about loneliness and social rejection than do insecurely attached adolescents and they display more adaptive coping strategies ^{56, 67}.

The Ethiopian situation

Comprising 30% of the population, adolescents in the age range of 15-24, represent a huge segment of potentially vulnerable population in Ethiopia ⁶⁸.

The few researches conducted among young people in Ethiopia indicate that an increasing number of them are involved in unsafe sexual practices and hence face undesired health outcomes such as unplanned pregnancy, too early childbirth, unsafe abortion and sexually transmitted diseases ^{69, 70}. Existing data on young people reveal a falling age at sexual debut, increasing rates of sexual involvement, high morbidity and mortality from abortion complications and high prevalence of HIV/AIDS ^{71, 72}. The maternal mortality ratio for Ethiopian women ages 15-19 is 1,270 per 100,000 live births, approximately three times higher than for women ages 30 to 34 ⁷³.

In Harar, a survey conducted among youth aged 14-29 indicated that nearly half of the males and one fifth of females reported that they had had sexual intercourse and about 15% of respondents had experienced unwanted pregnancies. The same study also found that only one-fourth of respondents reported ever having used a family planning method despite a favourable level of knowledge about family planning methods ⁷⁰. A recent study among in-school youth in Addis Ababa has shown that 18.1% of adolescents had previous sexual intercourse and a reported condom use rate of 51.1% in their last sexual intercourse ⁷⁴.

National surveillance reports show that the prevalence of HIV infection in Ethiopia is 6.6%. There is, however, a significant urban-rural differential. Urban HIV prevalence rates continue to be high at 13.7%, while it remains low for the rural areas at 3.7%. The highest prevalence of HIV infection (12.1%) in Ethiopia is seen in the age group 15-24 years of age, representing “recent infections”⁷⁵. Although current HIV prevalence estimate is not available for Dessie, it is one of the towns expected to have a higher disease burden as it shares most socioeconomic background characteristics with other urban areas.

Following the opening of technical and preparatory schools for senior high school students of grade 11 and 12 in selected urban sites in Ethiopia, it has become necessary for students particularly of the rural areas to reside in the nearby towns temporarily to attend their training. Students will be eligible to preparatory schools if they score a better grade-point-average in the Ethiopian General School Leaving Examination. Upon completion of a two-year preparatory training they are expected to take an entrance examination which will decide whether or not they

will join higher learning institutions. Preparatory school students, thus represent the future university students of the nation.

In many societies, the family and immediate community traditionally provided young people with information and guidance about sex and sexuality. Nevertheless, recent and rapid urbanisation and migration have meant that families and community networks have become more widely dispersed. This may have impacted on sexual socialization and education as well as on the sexual behaviour and sexuality of young people.

There are evidences that show that some adolescents, who are left in the care of siblings without consistent adult supervision, have increased opportunities for sexual activity. The effectiveness of traditional family expectations and structures in shaping sexual beliefs, expectations and behaviors appears to have been substantially weakened by population movement. With little continuity in sex education within the family, young people report that their peers are more relied upon for information and guidance about sex ⁷⁶.

Recent research conducted among a variety of groups of young people in Costa Rica, Chile, Cameroon, Zimbabwe, Cambodia, the Philippines and Papua New Guinea has shown that information is almost solely acquired from the media, and from peers and siblings, many of whom have themselves been similarly deprived of reliable adult guidance ⁷⁷.

Alternatively, it can be argued that since most parents in Ethiopia do not discuss about changes in adolescence, sexuality and contraception with their children adolescents could be equally vulnerable whether they live with their parents or not ⁷⁸.

Currently, there is unresolved concern among public officials whether these groups of students have a disproportionately high level of sexual risk behaviors and psychosocial problems possibly as a result of the inevitably more loose parental supervision and exposure to new environment.

To the investigator's best knowledge, there are no studies conducted in Ethiopia that examined possible differential vulnerabilities of in-school adolescents to sexual risk behaviors and psychosocial problems in reference to parental influences and rural-urban migration.

Although the findings of this study based upon preparatory school youth are not generalizable to out-of-school youth, in-school youth represent a demographically significant segment of the population of adolescents in Ethiopia and learning more of the factors that lead to sexual risk-taking behaviors and psychosocial problems in this segment of the population is of considerable strategic significance to national efforts to prevent teen pregnancy, and sexually transmitted diseases including HIV/AIDS and mental health problems.

School-based programs also help reach some out-of-school youth through the messages about safer sex disseminated to their school-attending peers. The research literature suggests that many of the studies that have focused on antecedents of sexual risk-taking are limited to a narrow range of socio-demographic variables, which have small or modest effect on behaviors ⁷⁹⁻⁸¹.

Clearly, a deeper understanding of some of the correlates of adolescents' sexual activity and underlying psychosocial problems is one of the key pre-requisite information required in designing relevant, effective and comprehensive adolescent health programs. Hence ongoing projects focusing on related issues among adolescents in the area will benefit most to tailor their future plans in accordance with local needs and contextual factors.

Findings of the survey could also be an important input to policies that could have impact on adolescent sexual and reproductive health. Furthermore, the results of the study would give insight into the spread of HIV/AIDS epidemic from urban towns into the rural area among adolescents.

The study aims to test the following hypotheses:

1. Young adolescents who are living away from home and families could be more likely to have sexual risk behaviors as a result of possible economic constraint and loose family supervision and guidance.
2. Adolescents coming from rural areas might be more prone to psychosocial problems as they are likely to lack the usual family support and faced with relatively new environment that needs some degree of psychological adjustment.

2. OBJECTIVES OF THE STUDY:

2.1. GENERAL OBJECTIVE:

To assess differential vulnerabilities of Dessie preparatory school adolescents to sexual risk behaviors and psychosocial problems in reference to their living arrangement and parental attachment.

2.2. SPECIFIC OBJECTIVES:

- 1.** To assess factors associated with early and unsafe sexual practices among preparatory school students.
- 2.** To determine and compare levels of psychosocial problems between students who live with their parents and those living away from parents.
- 3.** To compare the levels of sexual risk behaviors between students living with their parents and those living away from parents.
- 4.** Assess the extent of communication between adolescents and their peers, and families about sexuality and HIV/AIDS.

3. Methodology

3.1. Study design

Comparative cross-sectional study supplemented with FGDs.

3.2. Survey site

The study took place in Dessie preparatory school, south Wollo zone, Amhara National Regional State, Ethiopia. South Wollo zone has three preparatory schools. The one found in Dessie was selected mainly because it has the largest capacity serving a relatively rich mix of students from surrounding areas.

3.3. Source population

Adolescents in Hote preparatory school, Dessie, Ethiopia.

3.4. Study population

Adolescents in Hote preparatory school enrolled in the year 2002/2003.

3.5. Sampling procedure

Although the research plan called for the random selection of students after grouping students as those who came from surrounding areas and those permanently resident in the town, the lack of updated registration list made it difficult. Hence, all students were invited to participate in the study after a brief orientation about the purpose of the study was given. All in all there were 850 grade 12(10+2) preparatory school students who were enrolled in the year 2002/2003 G.C.

3.6. Sample size:

Sample size was calculated considering the “proportion of adolescents who are sexually experienced” as a key variable. The formula for two-sample proportions was used:

Assumptions made were:

P_1 = Proportions of in-school adolescents living with their parents who are sexually active = 18%;
taken from previous studies ^{74, 82}.

P_2 = Proportions of in-school adolescents living away from families who are sexually active = 28%. [A difference of 10 percent was assumed to exist for lack of similar studies].

$Z_{\alpha/2} = 1.96$ (95% confidence level); Power = 80% (β -error=20%)

Population allocation ratio: $n_2:n_1 = 2:1$

Where, n_2 = Students living away from home and families and n_1 = Students living at home with their families.

A ratio of 2:1 was used to allow a further stratification of students living away from families as those who frequently visit their families (at least once in two months) and those who visit their families only for vacations (more than two months on average). That would also increase the power of the study and enables to conduct subgroup analysis based on the frequency of visit that adolescents have to families.

Hence, Sample size: $n_1 = 218$ and $n_2 = 436$; Total sample size = 654.

To allow for possible non-response during the actual survey, we increased the sample size by 10% to get a final sample size of **720**. [240 for n_1 and 480 for n_2].

However, the total number of students available in the school didn't allow us to take such a proportion. Instead a ratio of urban to rural students of 1 to 1.17 was used in the final analyses.

The study sample consisted of 700 volunteer students. However, 33 incompletely filled

questionnaire were left out making final sample 667; 308 (46.2%) from urban and 359 (53.8%) from surrounding areas.

Inclusion Criteria: All preparatory students enrolled in the year 2002/2003 G.C. were eligible for the study.

Exclusion Criteria: Students enrolled in the year 2003/2004 G.C. were excluded from the study.

3.7. Principal research methods

The study used three kinds of survey instruments; self-administered questionnaire, focus group discussions, and peer-to-peer interview.

The questionnaire

A pre-tested structured self administered Amharic language questionnaire comprising 90 multiple choice items was developed for the study. The questionnaire was originally developed in English and then translated into Amharic. It was then back translated to English by another person. Most of the items were adapted from existing surveys. The questionnaire comprised 17 items on socio-demographic characteristics, 5 items on sexual and reproductive health knowledge, 10 on family connectedness, 4 on communication about sexuality and HIV/AIDS, 7 on social norms and gender roles, 2 on parental monitoring, 4 on peer influence and behavior, 16 on sexual behavior, 4 on coercion, and 21 on psychosocial concerns [see annex-II].

A self-administered anonymous questionnaire is preferred for this kind of survey dealing with sensitive issues to minimize social desirability bias and interviewer distortion that often limit the use of face-to-face interviews. The wording and sequence of questions was designed in such a

way that logical flow of ideas (from general to specific, from impersonal to personal, and from easy to difficult questions) was maintained.

To ensure standardized (uniform) transmission of information, supervisors and the principal investigator were around to respond to questions that may arise from misunderstandings or doubts. The investigator tried his best to avoid incompletely filled questionnaires and/or implausible answers that may follow negligence or misunderstanding. Instructions, questions, response categories and codes were in different font sizes and/or styles to facilitate easy differentiation.

Focus group discussions

A series of 4 focus group discussions was carried out among purposively selected students to explain some of the findings from questionnaire interview. Discussions were gender segregated and divided according to residence (urban and rural). The number of participants in each group ranged from 9-10 individuals. A semi-structured discussion guide was used to lead the discussions. The principal investigator moderated all focus group discussions. Two trained research assistants tape recorded and took note of all discussions. The focus group discussions centered on adolescents' perception of the role of parents in shaping their sexual behavior and tried to elucidate reasons for some of the psychosocial problems (See annex-III).

Peer-to-peer interview

A series of 16 peer-to-peer interviews was conducted with selected questionnaire respondents. Equal number of interviews (four males and females each from urban and rural students) was

conducted. A pre-tested guideline was used to lead the interview. Four trained interviewers (2 male and 2 female) conducted the interview.

3.8. Pre-testing

The questionnaire, interview guideline and discussion guide were pre-tested among other preparatory school students after which important modifications were made.

3.9. Data collection

Data collection took place from 20 December 2003 to 10 January 2004. Four trained research assistants administered the survey during a 45-50 minutes make-up class.

The research assistants distributed the questionnaire to the students, remained in the class room during administration and transported the completed questionnaire from the school.

The principal investigator supervised the research assistants through out data collection.

3.10. Independent variables

- Living arrangement (relationship with guardians) at the time of the survey.
- Socio-demographic factors like age, gender, residence, religious affiliation and attachment, level of parental education, academic achievement etc.
- Perceived family connectedness.
- Perceived parental monitoring.
- Communication with parents and peers about sexuality.
- Sexual and reproductive health knowledge.
- Social norms and gender roles.
- Khat and alcohol use.
- Depressive symptoms/sad feelings.

3.11. Outcome variables

- Whether students had ever had sex.
- Feeling so sad and hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities.
- Suicide attempt in the past 12 months.

3.12. Operational definitions

Family connectedness

Parent-teen connectedness can be defined as the degree of closeness/warmth experienced in the relationship that teenagers have with their parents. In this paper the term ‘connectedness’ is used interchangeably with ‘attachment’.

Family connectedness was measured using responses to 10 statements on a five point Likert scale ranging from 1(strongly disagree) to 5(strongly agree), five questions for each parent. (See annex-I).

Scores for all 10 items were totaled, forming a scale with good reliability (Cronbach’s $\alpha = 0.92$ overall, 0.924 for mother score and 0.951 for father score). Students who answered ‘don’t know’ or ‘not applicable’ were excluded from the analyses for family connectedness (n=114). Family connectedness scores were analyzed as a continuous variable with possible values ranging from 10 to 50.

Parental monitoring

Parental monitoring was assessed by 2 questions that asked adolescents whether their parents knew where they were and who they were with when not at school and away from home. The scale had a reliability coefficient (Cronbach’s α) of 0.76. Adolescents were categorized into 2

groups: those responding most of the times (4) and almost always (5) to each of the items, were classified as exposed to more parental monitoring; the rest were categorized as having less parental monitoring.

Urban/Rural students

Adolescents who responded as ‘yes’ to the question ‘Are you permanent resident in Dessie?’ are, hereafter labeled as ‘urban’; while those who answered ‘no’ to the same question are referred to as ‘rural’ students.

Attachment to religious institutions

The response category ‘attends frequently’ denotes a visit of religious institutions more than twice a month; while ‘seldom attends’ equates with a visit of less than or equal to twice a month.

3.13. Data Analysis

SPSS version 11.01 was used to enter, clean, and analyze data. Answer sheets were excluded from entry if students failed to answer questions about residence, living arrangement, parental monitoring, family connectedness, sexual behavior, and psychosocial concerns or if they gave inconsistent/invalid answers to all questions (n=33, 4.7%). Bivariate analyses were carried out to examine the relationship between the three outcome variables and selected determinant factors. Chi-square and t-tests were used as appropriate. Analysis of variance was used to examine difference in mean family connectedness by living arrangement. Factors for which significant bivariate association were observed were retained for subsequent multivariate analyses using

multiple logistic regression. All focus group discussions were taped and transcribed. The material was reorganized and analyzed according to predetermined themes.

3.14. Data quality considerations

A brief orientation session about the whole purpose of the research project was arranged for all students. A two-day intensive training was given for peer-to-peer interviewers and data collectors. Interviewers were matched by age and gender to the respondents so that young adolescents may feel safe to discuss such sensitive issues with adolescents of similar age and gender. Double entry of data ensured consistency.

4. Ethical considerations

The study protocol was approved by the Department of Community Health and then by the ethical clearance committee of the Medical Faculty of Addis Ababa University. The respective education bureau and school officials also expressed their willingness after they were informed about the whole purpose of the research project. Verbal consent was obtained from each study subject. Participants were told the objectives of the study and their right to refuse filling the questionnaire or participate in group discussions any time they want to. Students were told that their answers would remain anonymous and confidential.

5. Result

5.1. Socio-demographic characteristics

The socio-demographic characteristics of respondents are shown in table 1. Overall 700 students (97% of estimated sample size) completed the questionnaire. However, 33 incompletely filled questionnaires were left out making the final sample 667(93% response rate). Of the 667 students in the sample 308 (46.2%) were permanent residents of Dessie; 512 (76.8%) males; and 647 (99.0%) non-married. A significantly higher proportion of rural than urban (53.8% versus 46.2%; p-value= 0.048) and male than female students (76.8% versus 23.2%; p-value<0.0001) were represented.

Mean/median age of respondents was 18(\pm 0.98) years. Three hundred forty-nine (52.3%) mothers and 233 (34.9%) of fathers of respondents were illiterate. Parents of rural students were significantly more likely to be illiterate (p-value<0.0001). Ninety-two percent of students were in the age range 17-19 years.

For urban students the most common living arrangements were living with both parents (51.6%) and one biological parent only (22.1%), while a significant share of rural students live with their friends (52.1%) and alone (22.6%) [P-value<0.0001] (Figure1).

Four hundred one students (60%) identified themselves as orthodox Christian, 238 (35.7%) as Muslim and the rest 28 (4%) other religion.

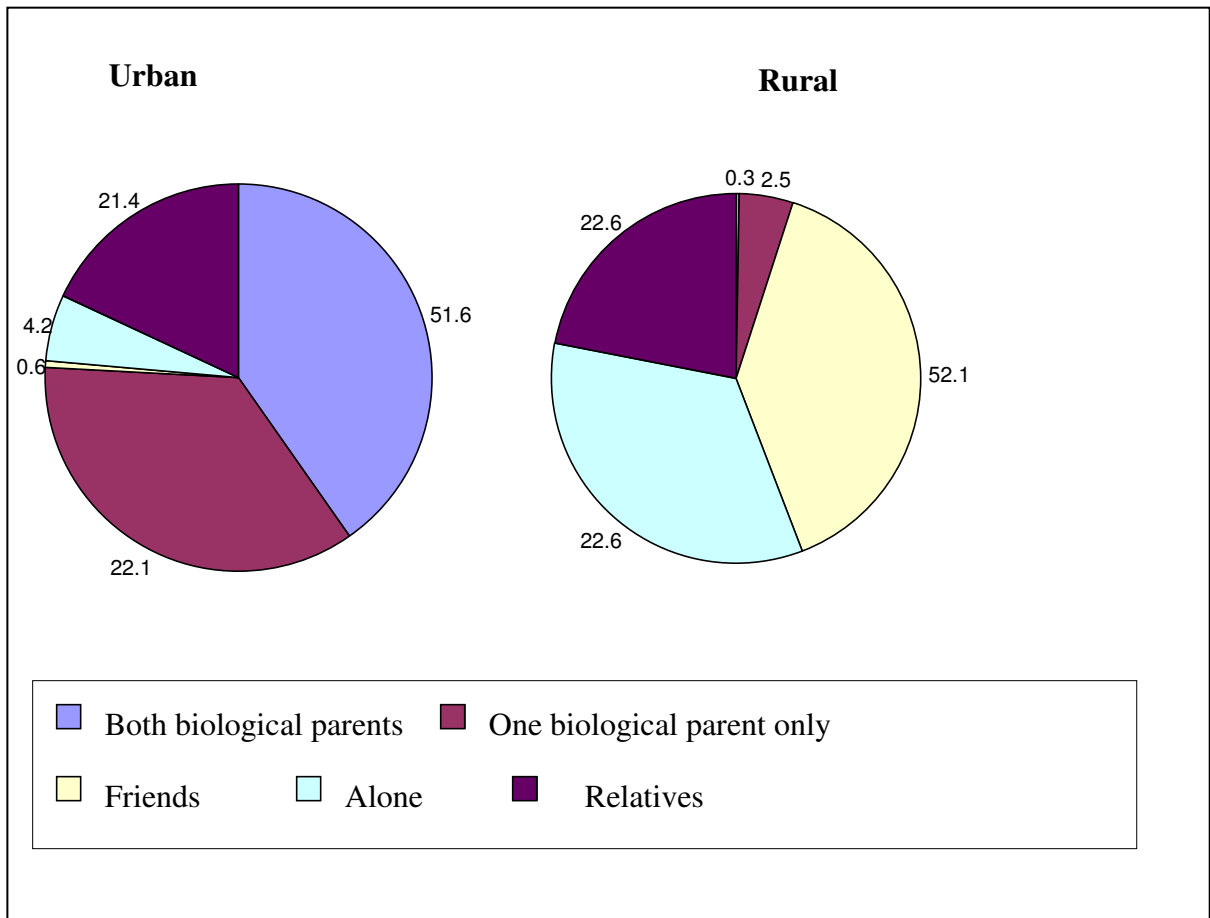


Figure1. Living arrangement of adolescents according to residence, Dessie, Ethiopia, 2004.

Table 1. Percentage distribution of students by selected socio-demographic characteristics and residence, Dessie, Ethiopia, 2004.

Variable	Urban (%)	Rural (%)	Total (n, %)	p-value
Total	46.2	53.8	667(100.0%)	0.048*
Age				
15-19	48.2	51.8	622(93.3)	<0.001*
20-25	17.8	82.2	45(6.7)	
Sex				
Male	39.6	60.4	512(76.8)	<0.001*
Female	67.7	32.3	155(23.2)	
Religion				
Orthodox	49.1	50.9	401(60.1)	0.039*
Muslim	39.9	60.1	238(35.7)	
Others	57.1	42.9	28(4.2)	
Are you married?				
Yes	28.6	71.4	7(1.0)	0.577
No	46.4	53.6	660(99.0)	
Living arrangement				
Both biological parents	99.4	0.6	160(24.0)	<0.001*
One biological parent only	88.3	11.7	77(11.5)	
Friends	1.1	98.9	189(28.3)	
Alone	13.8	86.2	94(14.1)	
Relatives	44.9	55.1	147(22.0)	
Attachment to religious institutions				
Attends frequently	44.4	55.6	394(59.1)	0.260
Seldom attends	47.6	52.4	250(37.5)	
Not religious	60.9	39.1	23(3.4)	
Educational status of mother				
Illiterate	27.8	72.2	349(52.3)	<0.001*
Primary (1-8)	51.3	48.7	113(16.9)	
Secondary (9-12)	71.6	28.4	134(20.1)	
Tertiary (13+)	80.3	19.7	71(10.6)	
Educational status of father				
Illiterate	24.0	76.0	233(34.9)	<0.001*
Primary (1-8)	36.8	63.2	125(18.7)	
Secondary (9-12)	62.4	37.6	170(25.5)	
Tertiary (13+)	71.9	28.1	139(20.8)	

* = Statistically significant

5.2. Sexual Behavior

Overall 172 (25.8%; 95% CI=22.5, 29.1) students reported having had sexual intercourse at least once. Eighty-one (57.0%) of survey students reported that their first sexual partner was a boy/girl friend, 26 (18.3%) a family member, 17 (12.0%) a stranger, 5 (3.5%) a teacher, 4 (2.8%) a husband/wife, and 9 (6.3%) others. More boys (30.0%) than girls (11.6%) and rural (34.3%) than urban students (15.9%) reported having had sex [OR=3.3; 95%CI = 1.9, 5.5 and OR=2.76; 95%CI = 1.89, 4.01 respectively]. The proportion of sexually active adolescents rose from 23.3% (145/622) among the age group 15-19 to 60.0% (27/45) in the age group 20-25 years [OR=4.93; 95%CI=2.64, 9.22].

Students who identified themselves as Muslim reported more sexual activity as compared to those who identified themselves as orthodox Christian (33.6% versus 20.9%; p-value=0.002). Most students (59.1%) reported attending religious institutions frequently; however, the proportion of students reporting sexual activity didn't differ significantly with respect to religious attachment.

Students who live alone or with their friends were significantly more likely to report sexual activity as compared to those who live with both biological parents [OR=2.53; 95%CI =1.34, 4.76 and OR=4.22; 95%CI=2.47, 7.20 respectively]. The mean age of sexual initiation was 17(±1.55) years overall: 16(±1.3) for urban and 17(±1.6) for rural [p-value = 0.03]; 16.9(±1.6) for males and 16.8(±1.0) years for female students [p-value=0.82].

Mean age of first sexual partner was 16.7(\pm 3.8) overall: 16(\pm 2.7) for males and 23(\pm 5.4) years for females [p-value<0.0001]. No significant difference was found by residence and living arrangement.

Lower educational level of either of the parents and lower students' grade point average were associated with sexual activity [OR=1.59; 95%CI=1.11, 2.28 and OR=2.27; 95%CI=1.31, 3.94 respectively]. Seventy two students (43.1%) reported having had two or more sexual partners in their lifetime. No significant difference was found according to gender, residence and living arrangement.

Of those who reported having had sexual intercourse, 87 (50.6%) students were sexually active in the past three months. There was no statistically significant difference with regard to gender, residence and living arrangement.

Tables 2 present results of bivariate and multiple logistic regression analyses for sexually active adolescents according to selected determinant factors.

Table 2. Correlates of sexual activity of students in Dessie Preparatory school, Ethiopia, 2004.

<i>Characteristics</i>	<i>Sexual intercourse</i>		<i>Crude OR[95%CI]</i>	<i>Adjusted OR[95%CI]</i>
	<i>Yes (n, %)</i>	<i>no (n, %)</i>		
Total	172[25.8]	495[74.2]		
Residence				
Urban	49[15.9]	259[84.1]	2.76[1.89, 4.01]*	
Rural	123[34.3]	236[65.7]		
Living arrangement				
Both biological parents(r)	22[13.8]	138[86.3]	1.00	1.00
One biological parent	13[16.9]	64[83.1]	1.27[0.60, 2.69]	1.24[0.54, 2.88]
Friends	76[40.2]	113[59.8]	4.22[2.49, 7.20]*	2.77[1.47, 5.24]*
Alone	27[28.7]	67[71.3]	2.53[1.34, 4.76]*	1.43[0.70, 2.92]
Relatives	34[23.1]	113[76.9]	1.89[1.04, 3.41]*	1.52[0.78, 2.95]
Sex				
Male	154[30.1]	358[69.9]	3.27[1.93, 5.54]*	1.28[0.69, 2.37]
Female(r)	18[11.6]	137[88.4]		1.00
Age				
15-19(r)	145[23.3]	477[76.7]	4.93[2.64, 9.22]*	1.00
20-25	27[60.0]	18[40.0]		4.37[2.11, 9.04]*
Parental monitoring				
Less	137[31.9]	292[68.2]	2.72[1.80, 4.11]*	1.70[1.06, 2.73]*
More(r)	35[14.7]	203[85.3]		1.00
Parental education				
Illiterate	69[31.9]	147[68.1]	1.59[1.11, 2.28]*	1.06[0.68, 1.67]
Literate(r)	103[22.8]	348[77.2]		1.00
Knowledge about; STDs				
Correct	156[27.2]	418[72.8]	1.80[1.02, 3.17]*	
Incorrect	16[17.2]	77[82.8]		
pregnancy				
Correct	40[24.1]	126[75.9]	0.89[0.59, 1.33]	
Incorrect	132[26.3]	369[73.7]		
HIV prevention				
Correct	35[29.4]	84[70.6]	1.25[0.81, 1.94]	
Incorrect	137[25.0]	411[75.0]		
Grade in E.G.S.L.C.E^a.				
1.8-2.5	71[25.8]	204[74.2]	1.67[1.00, 2.78]	
2.6-3.0	46[31.9]	98[68.1]	2.27[1.31, 3.94]*	
3.1-4.0(r)	18[16.2]	93[83.8]	1.00	

Peer pressure to have sex				
Yes	103[40.4]	152[59.6]	3.37[2.35, 4.83]*	1.82[1.20, 2.77]*
No	69[16.7]	343[83.3]		1.00
How many of your friends have had sex?				
None of them(r)	99[47.1]	111[52.9]	1.00	1.00
Few of them	59[24.0]	187[76.0]	4.44[2.40, 8.22]*	3.20[1.64, 6.25]*
Most of them	14[66.0]	197[93.4]	12.55[6.85, 23.0]*	7.21[3.68, 14.13]*
Ever consumed alcohol				
Yes	61[39.6]	93[60.4]	2.38[1.62, 3.49]*	1.94[1.24, 3.04]*
No(r)	11[21.6]	402[78.4]		1.00
Ever consumed khat				
Yes	99[30.4]	227[69.6]	1.60[1.13, 2.27]*	1.25[0.83, 1.89]
No(r)	73[21.4]	268[78.6]		1.00
Perceived family connectedness score				0.97[0.95, 0.99]*

* = statistically significant.

^a= Ethiopian General Secondary School Leaving Certificate Examination.

5.2.1. Contraceptive use

Amongst the sexually active students, 100 (58.1%) of them reported contraceptive use at first intercourse. There was no statistically significant difference according to gender, residence and living arrangement. Of this 65(65.0%) students reported condom use; males being more likely to report condom use than females [69.0% versus 38.5%; OR=3.6, 95%CI= 1.1, 11.9]. Condom use didn't differ significantly according to residence and living arrangement. Of the remaining 35, 7% (5.7% males, 15.4% females), 16% (12.6% males, 38.5% females), 8% (8% males, 7.7% females), 2%(2.3%males only), and 2% (2.3% males only) reported using pills, calendar method, withdrawal, foams, and others, respectively.

Overall 108 (62.8%) students reported contraceptive use at their most recent sexual intercourse. Sixty-seven (62%) of students who reported having used contraceptives used condom at the time

of their last intercourse. No significant difference was found with respect to gender, residence and living arrangement for both condom utilization and any contraceptive use at last sexual intercourse.

Consistent condom use was reported by 44(28.6%) of males and 3(16.7%) of females and it didn't differ significantly across gender. Figures 2 and 3 depict the different contraceptive methods used at first and last sexual intercourse.

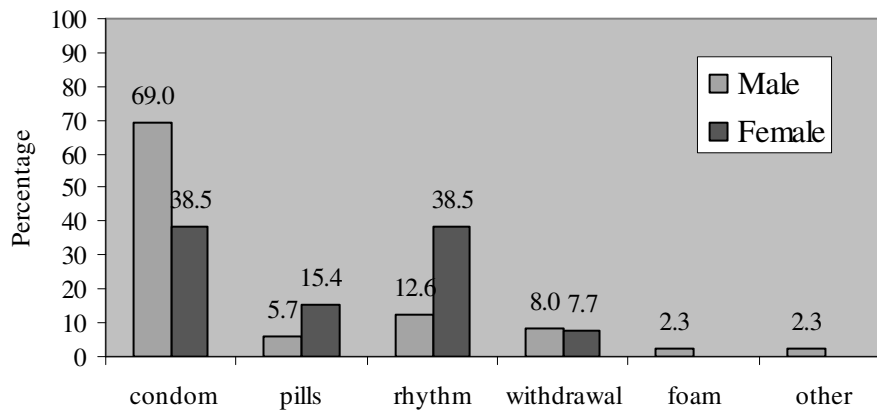


Figure 2. Contraceptive methods used at sexual debut, Dessie preparatory school students, Ethiopia, 2004.

With regard to the different types contraceptive methods used at sexual debut, no significant difference was found in terms of gender, residence and living arrangement.

In contrast regarding contraceptive methods used at last sexual intercourse, more urban (77.8%) than rural (56.8%) students reported condom use, while more rural than urban students reported having used pills (9.9% versus 7.4%), rhythm (21.0% versus 3.7%) and withdrawal methods (6.2% versus 3.7) [p-value=0.023]. Contraceptive use at sexual debut and most recent sex didn't differ significantly across gender and living arrangement.

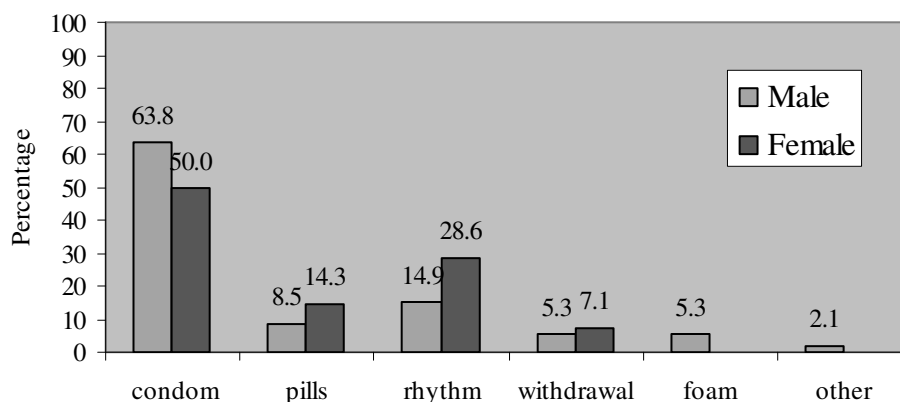


Figure 3. Contraceptive methods used at last intercourse, Dessie preparatory school students, Ethiopia, 2004.

One hundred fifty-five sexually active students (90.1%) reported that they are currently using some methods to prevent HIV infection; 54(34.6%) condom, 38(24.4) abstinence, and 64(41%) faithful one to one relationship. A significantly higher proportion of urban adolescents reported condom use and abstinence (47.6% versus 29.8% and 28.6% versus 22.8% respectively), while more rural than urban adolescents (47.4% versus 23.8%) reported having faithful one to one relationship (p-value=0.025). There was no significant difference according to gender and living arrangement.

5.2.2. Contact with commercial sex workers

Among the sexually active males, 23 (14.9%) reported having had sexual intercourse with commercial sex workers of which only 7 (30.4%) used condom consistently.

Students who came from surrounding areas were significantly less likely to use condom consistently (p-value=0.017). There was no significant difference in age and living arrangement for having contact with commercial sex workers and using condom consistently.

In the logistic regression analyses, living with friends, age of more than 20 years, alcohol consumption, having peer pressure to have sex and peers who have started sexual relationship, less perceived family connectedness and parental monitoring continued to be associated with sexual activity.

Three key outcome variables in the study namely: history of sexual activity in the past, use of condom during recent sexual intercourse, and consumption of alcohol were conveniently selected to construct a pyramid of sexual risk behavior (Figure 4). The pyramid is formed of 4 risk categories; very high risk, high risk, at risk, and minimal risk.

Very high-risk category is composed of those who reported sexual activity, didn't use condom during most recent sex, and consumed alcohol. The high-risk category is one with history of sexual activity, who didn't use condom during most recent sex and didn't consume alcohol. The at-risk category is one with past sexual activity, used condom during most recent intercourse and denied consumption of alcohol. The last category reported no sexual debut and no alcohol consumption so far.

The base of the pyramid is formed of the largest group (73.3%), with minimal risk. The very high-risk category (3.3%) formed the tip. As can be seen from the figure, rural students and youth who don't live with both biological parents and perceived less parental monitoring formed the majority of the very high risk and high-risk categories.

The at-risk group contained mostly adolescents who don't live with both biological parents and the minimal risk group was dominated by urban and younger students.

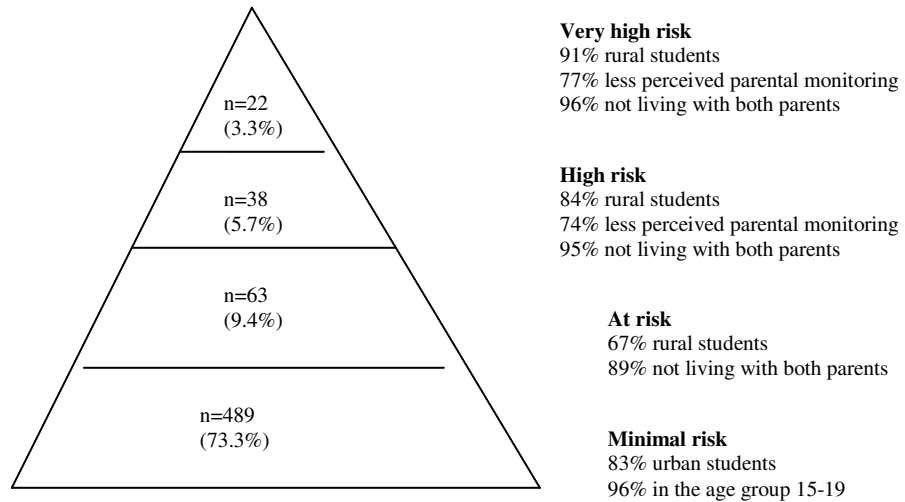


Figure 4. Schematic presentation of the pyramid nature of sexual risk categories (n=612)

5.2.3. Coercion

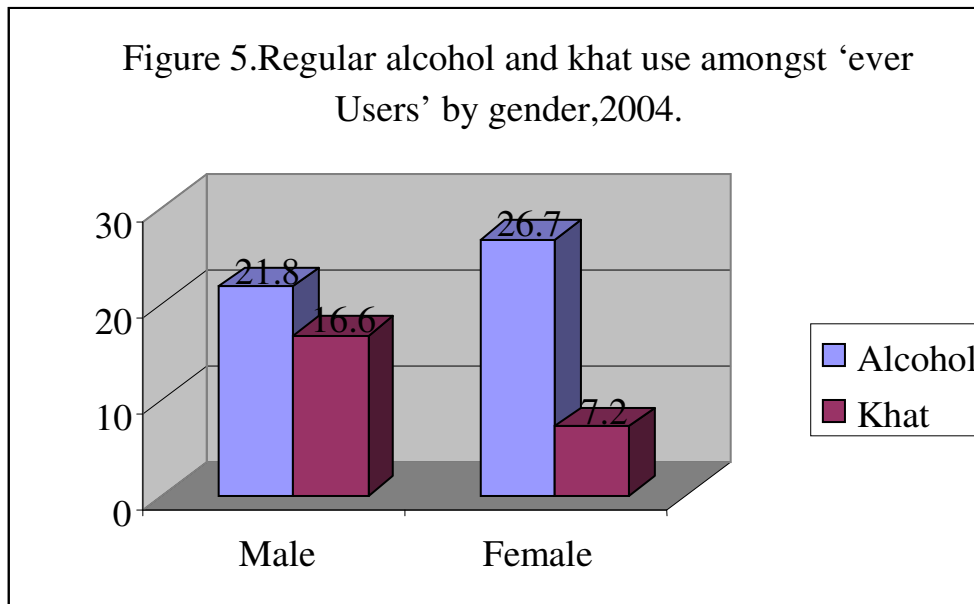
Of those who are sexually active, 132(76.7%) reported that they were willing the first time they had sex. Forced sexual intercourse was reported by 8(4.7%) overall; more females (16.7%) than males (3.2%) reported that they were forced at first sexual intercourse (p-value = 0.004). Seven (4.1%) claimed that they were given drugs and alcohol, 16(9.3%) felt threatened, 3(1.7%) convinced with money or gifts and 6(3.5%) mentioned other reasons. There was no significant difference according to residence and living arrangement.

5.2.4. Khat and alcohol use

Overall, 326 (48.9%) and 154 (23.1%) students reported consumption of khat and alcohol respectively. There was no statistically significant difference according to residence. Males were more likely to chew khat [OR=1.97, 95%CI=1.36, 2.86], but no significant gender difference was found in alcohol use. Regular consumption of alcohol (consumption at least 2-4 times a month) was reported by 27 (5.3%) of males and 8 (5.1%) of the females.

Among the 'ever khat users', 45 (16.6%) males and 4 (7.2%) female students reported consuming khat regularly (consumption at least 2-4 times a month). See Figure 5.

Ninety-two (13.8%) students claimed to consume both alcohol and khat. Students who reported having consumed both alcohol and khat were significantly more likely to be sexually active (42.4% versus 23.1%; OR=2.45; 95%CI=1.55, 3.86) and being bored with life and the world around them (62.0% versus 49.4%; OR=1.67; 95%CI=1.06, 2.62). No significant association was found between alcohol and khat consumption and sad feelings, suicidal ideation and suicide attempt. Sixteen sexually active students (9.3%) reported that they have consumed khat and or alcohol at sexual debut. There was no significant difference according to gender, residence and living arrangement. Khat and alcohol use were not associated with condom utilization for either of the sexes and residence.



5.2.5. Knowledge of selected sexual and reproductive health issues

Table 3 shows that only 228 (34.2%) and 166 (24.9%) of the students knew the fertile period in the menstrual cycle and the possibility of pregnancy before menarche respectively. There was no statistically significant difference according to living arrangement and gender for any of the knowledge questions. Rural students were significantly more likely to correctly identify the fertile period in the menstrual cycle (37.6% versus 30.2%; OR=0.72; 95% CI=0.52, 0.99) and know the means of avoiding HIV infection (21.4% versus 13.6%; OR=0.58; 95% CI=0.38, 0.87). No significant difference by residence was found regarding knowledge about mother-to-child transmission of HIV and the possibility of pregnancy before menarche. This is in contrary to what students suggested in focus groups. Many of the participants believed that urban adolescents' knowledge is better because they have more opportunities to access reproductive health information. Participants unanimously noted that although knowledge is a factor, what matters most to change behavior is the perception of being monitored and attached to parents on the side of students.

“Those [adolescents] who have better reproductive health knowledge are likely to protect themselves from sexual risk behaviors. But, that doesn't work always; for example, a friend of mine who is a member of the anti- AIDS club and knows well about HIV transmission and pregnancy, ended up in having an unwanted child despite his knowledge.”

A 19 year old rural male student explained.

Table 3. Percentage Distribution of Knowledge of preparatory school students on selected sexual and reproductive health issues, Dessie, Ethiopia, 2004.

<i>Variables</i>	<i>Urban, n=359</i>	<i>Rural, n=308</i>	<i>OR[95% CI]</i>
Knowledge of fertile period in menstrual cycle			
Correct	30.2	37.6	0.72[0.52, 0.99]*
Incorrect	69.8	62.4	
Means of avoiding HIV infection			
Correct	13.6	21.4	0.58[0.38,0.87]*
Incorrect	86.4	78.6	
Knowledge on MTCT^a of HIV			
Correct	83.8	87.5	0.74[0.48, 1.10]
Incorrect	16.2	12.5	
Knowledge about possibility of pregnancy before menarche			
Correct	23.1	26.5	0.83[0.58, 1.19]
Incorrect	76.9	73.5	
Knowledge about possibility of having STD without knowing it			
Correct	43.7	56.3	0.49[0.31, 0.77]*
Incorrect	61.3	38.7	

* = statistically significant

^a= Pregnant mother-to-child transmission HIV infection.

5.2.6. Communication and discussion regarding sexuality and HIV/AIDS

Overall, 572 (85.8%) of students reported that they have ever discussed about sexuality and HIV/AIDS. Four hundred thirteen students (61.9%) discussed with their peers (of same sex) about sexuality and HIV/AIDS. As compared to urban students, the rural ones were significantly more likely to discuss with teachers (p-value<0.001), health practitioners (p-value<0.001) and family members (p-value=0.009). More males than females reported discussion with friends of same sex, teachers, and health practitioners [OR=2.19; 95%CI=1.38, 3.47, OR=2.01; 95%CI=1.27, 3.18, and 2.11; 95%CI=1.32, 3.37 respectively].

Mass media was the dominant source of information regarding sexuality and HIV/AIDS, mentioned by 467 (62 %) of students. There was no significant gender difference with regard to the dominant source of information regarding sexuality and HIV/AIDS. A significantly higher proportion of rural students mentioned teachers/school AIDS clubs (42.3% versus 28.6%; p-value<0.001), health practitioners (p-value<0.001) and peers (p-value=0.018) as the most important source of information. More males (42.4%) than females (22.6%) mentioned health practitioners as the most important source of information regarding sexuality and HIV/AIDS (OR=2.52; 95%CI=1.67, 3.82).

Overall, four hundred-fifty three students (67.9%) reported that they rely on health practitioners followed by teachers (reported by 284 students [42.6%]) to get information and guidance about HIV/AIDS. A significantly higher proportion of rural students reported that they rely on health practitioners, families and teachers to get information and guidance about HIV/AIDS (p-value<0.001). There was no significant gender difference concerning reliable source of information. (See table 4).

Table 4: Communication and discussion regarding sexuality and HIV/AIDS, Dessie preparatory school students, Ethiopia, 2004

<i>Variable</i>	<i>Urban[n, %]</i>	<i>Rural[n, %]</i>	<i>p-value</i>
Ever discussed about sexuality			0.14
Yes	257(44.9)	315(55.1)	
No	51(53.7)	44(46.3)	
<i>Whom did you discuss with? †</i>			
Family members			0.009*
Yes	101[32.8]	154[42.9]	
No	207[67.2]	205[57.1]	
Peers			0.771
Yes	219[71.1]	260[72.4]	
No	89[28.9]	99[27.6]	
Teachers			<0.001*
Yes	83[26.9]	167[46.5]	
No	225[73.1]	192[53.5]	
Health practitioners			<0.001*
Yes	71[23.1]	160[44.6]	
No	237[76.9]	199[55.4]	
<i>Most important source of information about sexuality & HIV/AIDS†</i>			
Family			0.191
Yes	34[11.0]	53[14.8]	
No	274[89.0]	306[85.2]	
Peers			0.018*
Yes	70[22.7]	112[31.2]	
No	238[77.3]	247[68.8]	
Mass media			0.245
Yes	223[72.4]	244[68.0]	
No	85[27.6]	115[32.0]	
Health practitioners			<0.001*
Yes	74[24.0]	178[49.6]	
No	234[76.0]	181[50.4]	
<i>Who do you rely to get information & guidance about sexuality & HIV/AIDS†</i>			
Family			<0.001*
Yes	131[42.5]	208[57.9]	
No	177[57.5]	155[42.1]	
Peers			0.167
Yes	159[51.6]	165[46.0]	
No	149[48.4]	194[54.0]	
Teachers			<0.001*
Yes	107[34.7]	177[49.3]	
No	201[65.3]	182[50.7]	
Health practitioners			<0.001*
Yes	194[63.0]	259[72.1]	
No	114[37.0]	100[27.9]	

*= Statistically significant.

† = multiple responses are possible.

5.2.7. Peer influence and behavior

As presented in table 5, more males (44.9%) than females (16.1%) reported having peer pressure to have sexual intercourse [OR=4.24; 95%CI=2.67, 6.73]. A significantly greater proportion of girls than boys believed that their peers were sexually experienced (82.6% versus 64.3%; OR=2.64; 95%CI=1.68, 4.15]. There was no significant difference by residence in reported peer pressure and behavior.

Two hundred seven (40.4%) of boys claimed that few of their peers have started sexual intercourse, while 183 (35.7%) of boys claimed that most of their peers have started sexual intercourse; rural boys being more likely to report that most of their peers have started sex (39.8% versus 29.6%; p-value = 0.031).

Regarding peer behavior, 39 (25.2%) of female students reported that few of their peers have started sexual intercourse, while 27 (17.4%) believed that most of their peers have started sexual intercourse. Rural girls were significantly more likely to report that few/most of their peers have started sex (p-value = 0.002). Students living with their friends, alone and one biological parent were significantly more likely to report that they have peer pressure to have sexual intercourse as compared to those who live with both biological parents [OR=2.79; 95%CI=1.76, 4.40 ; OR=2.04; 95%CI=1.18, 3.51 and OR=2.28; 95%CI=1.10, 4.70 respectively].

Table 5. Reported peer pressure and peer behavior of preparatory school students by sex and residence, Dessie, Ethiopia, 2004.

<i>Variable</i>	<i>Urban(n=308)</i>		<i>Rural(n=359)</i>	
	<i>male</i>	<i>female</i>	<i>male</i>	<i>female</i>
Peer pressure to have sex				
Yes	89[43.8]	13[12.4]	141[45.6]	12[24.0]
No	114[56.2]	92[87.6]	168[54.4]	38[76.0]
<i>X²(p-value)</i>	<i>29.5 [<0.001]*</i>		<i>7.4[0.004]*</i>	
How many of your friends have had sex				
None of them	60[29.6]	11[10.5]	123[39.8]	16[32.0]
Few of them	85[41.9]	26[24.8]	122[39.5]	13[26.0]
Most of them	58[28.6]	68[64.8]	64[20.7]	21[42.0]
<i>X²(p-value)</i>	<i>38.7[<0.001]*</i>		<i>10.0[0.004]*</i>	
Any sexual intercourse with CSWs^a among your male friends				
Yes	30[14.8]	10[9.5]	62[20.1]	7[14.0]
No	79[38.9]	38[36.2]	109[35.3]	13[26.0]
Don't know	94[46.3]	57[54.3]	138[44.7]	30[60.0]
<i>X²(p-value)</i>	<i>38.7[<0.001]*</i>		<i>4.08[0.130]</i>	
Has your best friend ever played sex				
Yes	79[38.9]	60[57.1]	124[40.1]	13[26.0]
No	54[26.6]	15[14.3]	111[35.9]	21[42.0]
Don't know	70[34.5]	30[28.6]	74[23.9]	16[32.0]
<i>X²(p-value)</i>	<i>10.5[0.005]*</i>		<i>3.8[0.150]</i>	

* = statistically significant

a = commercial sex workers

5.2.8. Perceived family connectedness

The perceived family connectedness scale ranged from 10 to 50. Twenty one students (3.8%) scored 20 or lower, 34(6.1%) scored 21-30 and 498(90%) scored 31-50. Sexually active students and those who reported using condom inconsistently had a significantly lower level of perceived family connectedness. There was no statistically significant difference in mean family connectedness score across gender, residence (urban versus rural) and living arrangement. Students who reported consumption of alcohol had a significantly lower family connectedness

score; however no significant difference was found in family connectedness with regard to khat use and students' grade-point-average.

Youth who reported feeling so sad and hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities had a significantly lower family connectedness. Students who reported seriously considering suicide were significantly more likely to have less family connectedness (p-value=0.03) as compared to those who did not report. No significant mean family connectedness difference was found with regard to reports of actual suicide attempt. Students who reported to be sexually active in the past three months had a significantly lower perceived maternal connectedness as compared to sexually inactive adolescents [p-value=0.08).

There was no significant difference in mean family connectedness score regarding condom use (at first and last intercourse) and contact with commercial sex workers. Mean family connectedness score didn't differ significantly according to frequency of visit with families and remoteness of their parents' residence for rural adolescents [see table 6].

During group discussions, participants universally agreed on the positive impact of living with families and having good parent-teen connectedness. When asked how living arrangement and parent-teen connectedness affect sexual risk behavior, participants commented that adolescents who have better connectedness to their parents are likely to postpone sexual intercourse until marriage and use contraceptives more consistently if sexually active.

“Our parents are more ‘mature’; [They] know what is good and bad from their experience. Hence a more closely attached adolescent is likely to get good parental guidance that will help him postpone unplanned sexual activity.”

An 18 year old urban male student explained.

Table 6. Mean family connectedness score (standard deviation) among youth attending preparatory school, Dessie, Ethiopia, 2004.

Characteristics	Mean (SD)‡	P-value
Residence		0.970
Urban	43.5(8.0)	
Rural	43.5(8.7)	
Sex		0.160
Male	43.8(8.3)	
Female	42.5(8.9)	
Living arrangement		0.540
Both biological parents	44.2(7.9)	
One biological parent only	42.4(8.1)	
Friends	43.9(8.5)	
Alone	42.7(9.7)	
Relatives	43.0(8.0)	
Ever had sex		
Boys		0.043**
Yes	42.4(9.2)	
No	44.3(7.8)	
Girls		0.010**
Yes	33.9(12.7)	
No	43.8(7.5)	
Consistent condom use		0.033**
Yes	44.4(7.2)	
No	40.4(10.6)	
Ever consumed alcohol		0.041**
Yes	42.1(8.7)	
No	43.9(8.3)	
Ever consumed khat		0.507
Yes	43.7(8.1)	
No	43.2(8.7)	

Felt sad or hopeless almost everyday for two weeks or more in a row and stopped doing some usual activities		
Boys		0.039**
Yes	42.1(9.7)	
No	44.3(8.7)	
Girls		0.009**
Yes	39.7(9.8)	
No	44.1(8.0)	
Ever seriously considered suicide		
Yes	39.9(10.1)	0.03**
No	43.3(8.7)	
Ever attempted suicide in past 12 months		
Yes	41.9(8.6)	0.28
No	43.6(8.4)	
Ever attempted suicide		
Yes	42.6(8.3)	0.49
No	43.6(8.4)	
Being worrisome, can't sleep or don't sleep well		
Yes	41.7(9.4)	<0.001**
No	44.5(8.0)	
Mentally incoherent, moody and stressful		
Yes	42.0(9.2)	0.002**
No	44.3(8.2)	
Being bored with life and the world around you		
Yes	42.1(9.3)	0.015**
No	44.0(8.3)	
Befuddled, having a headache with no obvious cause		
Yes	41.9(9.6)	0.001**
No	44.4(7.7)	

**= Statistically Significant.

‡ = high scores indicate good perceived family connectedness.

5.2.9. Perceived parental monitoring

Of the 667 students participating in the study, 429 (64.3%) were categorized as having less perceived parental monitoring. In the bivariate analysis less perceived parental monitoring was associated with male sex, being rural student, living alone and with friends (as compared to those

living with both biologic parents), sexual activity, consumption of khat and alcohol and having peers who are sexually experienced. There was no significant difference in perceived parental monitoring with regard to number of sexual partners and condom use. As shown in table 9, less perceived parental monitoring continued to predict sexually activity when other covariates were controlled in logistic regression.

In focus groups participants had mixed opinion concerning the effect of parental monitoring on adolescents' sexual risk behavior. Most agreed that parental monitoring is good when it is balanced (not 'too much'). Urban girls, in particular argued that excessive and coercive parental control could in fact enhance negative (unwanted) behavior. One 18-year old girl explained;

“Parents should trust their children (adolescents). What is important is to have a close relationship. For example, knowing where and with whom I stayed, being over suspicious and doubting what I am telling them would only damage mutual trust.”

5.2.10. Perception of students on selected social norms and gender roles

From table 7, it can be noted that males were significantly more likely to believe that contraceptive knowledge encourages sex (38.5% versus 23.9%; p-value=0.001) and that having sex while they are teenagers would make them feel more important (10.5% versus 5.2%; p-value=0.045). A significantly higher proportion of females believed that having a child while in a high school is a problem for the mother and baby but not for the father (32.3% versus 12.7%; p-value<0.0001). More rural than urban students believed that contraceptive knowledge encourages sex (41.5% versus 27.6%; p-value<0.0001), and gave more importance to males' virginity (83.6% versus 74.7%; p-value=0.011).

During group discussions, many of the participants mentioned that the western culture has more influence on urban students making traditional norms less rigid in the towns. As a result, rural students particularly females suffer most from harmful social norms and gender roles. By contrast, some urban students commented that some of the social norms and gender roles are disadvantageous for either sex. They argued that, males are for example more free[less shy] to express their feelings which sometimes encourages risky sexual activity, while females are less open and yet bear the major risk of unwanted pregnancy and HIV infection.

“Social norms and gender roles have more influence on rural students. For example, although virginity in general shows cleanliness for both sexes, we value females’ virginity far more than males’ virginity.”

An 18 year old rural male student commented.

Table7. Percentage distribution of students according to Perception on Selected Social norms and gender roles, Dessie, Ethiopia, 2004.

<i>Variables</i>	<i>Male n=512</i>	<i>Female n=155</i>	<i>X²</i>	<i>p-value</i>
<i>Social norms</i>				
-Knowledge of contraceptives encourages sex			13.3	0.001*
Agree	38.5	23.9		
Disagree	56.8	67.1		
No idea	4.7	9.0		
-Having a baby while in a high school			35.7	<0.001*
Is not a problem at all	1.4	0.0		
Is not a problem because family helps	0.2	0.6		
Is a problem but it is okay	3.9	1.3		
Is a problem for mother & baby but not father	12.7	32.3		
Is a problem for mother, baby & father of baby	81.8	65.8		
<i>Sexual values</i>				
-It is against my values to have sex while I am a teenager			0.485	0.785
Agree	78.9	81.3		
Disagree	13.7	11.6		
Not sure	7.4	7.1		
-Sex while I am a teenager would make me feel more important			6.18	0.045*
Agree	10.5	5.2		
Disagree	83.6	91.6		
Not sure	5.9	3.2		
<i>Gender roles</i>				
-Who should handle family expenditures			0.24	0.890
Father/husband	7.6	6.5		
Mother/wife	2.5	2.6		
Both (husband & wife) together	89.8	91.0		
-Virginity for a woman until she gets married			4.34	0.114
Very important	88.3	91.0		
Important	9.0	9.0		
Not important	2.7	0.0		
-Virginity for a man until he gets married			3.66	0.160
Very important	80.1	77.4		
Important	15.6	20.6		
Not important	4.3	1.9		

* = Statistically significant

5.3. Psychosocial concerns - Emotional wellbeing (health)

5.3.1. Role models

A relatively significant proportion of students (134/667, 20.1%) mentioned teachers as their role models followed by their own same sex friends (128/667, 19.2%). Only 76(11.4%) students mentioned parents/parent figures as role models. As compared to females, males were more likely to mention teachers as role models (23.6% versus 8.4%, p-value<0.0001). There was no significant difference according to residence.

5.3.2. Important issues of concern

Two hundred seventy-eight (41.7%) students claimed that they are affected very much by lack of parental support. A significantly higher proportion of rural (46.9%) than urban boys (34.0%) reported lack of parental support (p-value<0.0001). However, there was no significant difference among female students according to residence. Compared to females, urban males were more likely to report concern about HIV/AIDS (p-value=0.006). [See table 8].

Table 8. Reported concerns that affect students at Dessie preparatory school, Ethiopia, 2004.

<i>Variable</i>	<i>urban (n=308)</i>		<i>Rural(n=359)</i>	
	Male	Female	male	Female
Lack of parental support				
Not at all	71[62.8]	42[37.2]	66[83.5]	13[16.5]
A little	41[25.5]	14[25.5]	91[88.3]	12[11.7]
Very much	69[62.7]	41[37.3]	145[86.3]	23[13.7]
Do not know	22[73.3]	8[26.7]	7[77.8]	2[22.2]
<i>X²(p-value)</i>	3.53(0.32)		1.39(0.71)	
Who pays for school/other fees				
Not at all	81[60.9]	52[39.1]	56[81.2]	13[26.0]
A little	42[73.7]	15[26.3]	66[86.8]	10[20.0]
Very much	61[70.9]	25[29.1]	180[87.4]	26[52.0]
Do not know	19[59.4]	3[40.6]	7[87.5]	1[2.0]
<i>X²(p-value)</i>	4.59(0.20)		1.73(0.63)	
STDs/HIV/AIDS				
Not at all	49[52.7]	44[47.3]	65[85.5]	11[14.5]
A little	44[71.0]	18[29.0]	58[87.9]	8[12.1]
Very much	91[74.6]	31[25.4]	177[85.9]	29[14.1]
Do not know	19[61.3]	12[38.7]	9[81.8]	2[18.2]
<i>X²(p-value)</i>	12.33(0.006)*		0.37(0.95)	
Risk of unplanned pregnancy(females only)				
Not at all		40[75.5]		13[24.5]
A little		23[69.7]		10[30.3]
Very much		34[58.6]		24[41.4]
Do not know		8[72.7]		3[27.7]
<i>X²(p-value)</i>		3.8[0.28]		

* = Statistically significant.

5.3.3. Self-esteem and satisfaction with social relationships

As shown in table 9, five hundred forty-four (81.6%) students reported that they are happy with their friendships. There was no significant difference with respect to gender, residence and living arrangement. A significantly higher proportion of rural (43.5%) than urban (29.2%) and those students not living with both biological parents (40.9% versus 24.5%) reported that they don't

have enough friends (p-value=0.001). Rural adolescents and students not living with both biological parents were also more likely to report that their friendships are not as good they would like them to be (45.4% versus 31.2%; p-value=0.001 and 41.1% versus 31.9%; p-value<0.0001, respectively).

Regarding self-esteem, 120 (18%) students didn't agree with the statement 'overall I am satisfied with myself. There was no significant difference according to gender and residence.

Table 9. Satisfaction with social relationship and Self esteem reports of Dessie preparatory school students by residence, Ethiopia, 2004.

Variable	Urban (n=308)	Rural (n=359)	p-value
<i>Satisfaction with social relationships</i>			
I am very happy with my relationships			0.597
Agree	81.5	81.6	
Neutral	10.4	8.6	
Disagree	8.1	9.7	
I don't have enough friends			<0.001*
Agree	29.2	43.5	
Neutral	5.5	12.3	
Disagree	65.3	44.3	
My friendships are not as good as I would like them to be			<0.001*
Agree	31.2	37.1	
Neutral	13.3	47.7	
Disagree	55.5	53.1	
<i>Self esteem</i>			
Overall I am satisfied with myself			0.063
Agree	85.7	78.8	
Neutral	6.5	10.6	
Disagree	7.8	10.6	
At times I think I am no good at all			0.535
Agree	30.2	34.3	
Neutral	10.1	9.5	
Disagree	59.7	56.3	
I feel that I have many good personal qualities			0.591
Agree	74.7	76.0	
Neutral	13.6	11.1	
Disagree	11.7	12.8	

* = Statistically significant

5.3.4. Worries and important concerns in life

Three hundred twenty four students (48.6%) claimed that they worry a lot about getting a job when they are older; while, only 161 (24.1%) of students worry a lot about being infected with HIV. More rural than urban students (31.2% versus 15.9%; p-value<0.0001) and those not living with both parents as compared to those living with both parents (51.4% versus 39.9%; p-value=0.025) reported that they worry a lot about getting a job when they are older. Males and rural students were significantly more likely to worry about getting HIV/AIDS (p-value<0.0001).

Three hundred fourteen (47.0%) of students ranked schooling as their most important concern in life at the moment followed by rape (19.8%) and job (19.9%) in that order. More males and rural students mentioned job as their third most important concern (21.3% versus 15.5%; p-value<0.0001 and 21.2% versus 18.5%; p-value= 0.028 respectively). School outranked as the most important concern among females mentioned by 76(49.0%) of them.

During group discussions, students generally agreed that psychosocial problems are important issues of concern for students of either sex or residence in preparatory schools. Among concerns that worry adolescents very much; academic achievement, risk of unwanted pregnancy, contracting HIV/AIDS and getting the right romantic partner who could be trusted were mentioned by many of them.

When asked whether urban or rural students are more affected, participants had divergent views. Some of the urban male students argued that adolescents from rural areas give more priority to their education and are less concerned about psychosocial issues. Others suggested the contrary.

They commented that rural adolescents bear additional burden of economic constraint and lack of family support when they face problems and hence are more prone to psychosocial problems.

“Living alone away from families is painful. I used to be a clever student when I was living with my parents. At times I feel lonely and think that I have no one to share my problems. As a result of this, even my academic performance has decreased dramatically.”

An 18 year old rural female student remarked.

Participants’ opinion as to which group of adolescents have more secure attachment was mixed. Many students underscored the importance of living with both biological parents as a precondition to having a secure attachment. Some rural students, however, have argued that they have good emotional attachment despite the physical separation.

Regarding the role of attachment to parents, participants universally agreed on the positive impact of close parent-teen relationship to good psychosocial health. In contrast, most students noted that parental monitoring could only affect adolescents’ psychosocial health negatively, if at all it has any effect.

“Good attachment to families means that we can get solutions from them [parents] whenever we face stressful situations. Monitoring, in contrast will degrade our confidence to solve our own problems.”

An 18 year old urban male student explained.

5.3.5. Sad feelings

Three hundred eighty-six (57.9%) students reported feeling lonely and depressed at least once in the past three months. As compared to urban students, rural students were significantly more likely to feel lonely and depressed (61.6% versus 53.6%; OR=0.72; 95%CI=0.53, 0.98). No significant difference was found according to gender.

One hundred eighty-two (27.3%; 95% CI=23.9, 30.7) students reported feeling sad or hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities; females and students living alone, with friends and relatives being more likely to have the symptoms [OR=1.60; 95%CI= 1.09, 2.36, OR=2.21; 95%CI=1.22, 4.01, OR=2.09; 95%CI=1.25, 3.48, and OR=2.29; 95%CI=1.34, 3.90 respectively]. A complete breakout of the data is given in table10.

Table 10. Reports of sad feelings and suicide attempt by residence, Dessie preparatory school, Ethiopia, 2004.

Variable	Urban (n,%)	Rural (n,%)	OR [95% CI]
<i>Ever have any of the following in the past 3 months</i>			
Feeling lonely, depressed			0.72[0.53, 0.98]
Yes	165[53.6]	221[61.6]	
No	143[46.4]	138[38.4]	
Being worrisome, can't sleep or don't sleep well			0.78[0.58, 1.06]
Yes	150[48.7]	197[54.9]	
No	158[51.3]	162[45.1]	
Mentally incoherent, moody and stressful			0.77[0.57, 1.05]
Yes	156[50.6]	205[57.1]	
No	152[49.4]	154[42.9]	
Being bored with life and the world around you			1.2[0.9, 1.7]
Yes	166[53.9]	175[48.7]	
No	142[46.1]	184[51.3]	
Befuddled, having a headache with no obvious cause			0.71[0.52, 0.96]
Yes	147[47.7]	202[56.3]	
No	161[52.3]	157[43.7]	
Ever felt so sad or hopeless almost everyday for two weeks or more in a row that you stopped doing some usual activities in the past 12 months			
Yes	74[24.0]	108[30.1]	0.74[0.52, 1.04]
No	234[76.0]	251[69.9]	
Ever seriously considered attempting suicide			
Yes	15[4.9]	27[7.5]	0.63[0.33, 1.21]
No	293[95.1]	332[92.5]	
Ever planned how you would attempt suicide			
Yes	10[3.2]	26[7.2]	0.43[0.20, 0.91]
No	298[96.8]	333[92.8]	
Ever attempted suicide in the past 12 months			
Yes	14[4.5]	25[7.0]	0.64[0.33, 1.25]
No	294[95.5]	334[93.0]	
Ever attempted suicide			
Yes	17[5.5]	27[7.5]	0.72[0.38, 1.35]
No	291[94.5]	332[92.5]	

* = Statistically significant.

In the binary logistic regression analyses, female gender, not living with both biological parents, having a lower grade-point average and less family connectedness retained their association with depressive symptoms (Table 11).

Table 11. Factors associated with feeling sad or hopeless almost everyday for 2 weeks in a row that they stopped doing some usual activities, Dessie preparatory school, Ethiopia, 2004.

<i>Variable</i>	<i>Ever felt sad or hopeless</i>		<i>Crude</i>	<i>Adjusted</i>
	<i>yes</i>	<i>no</i>	<i>OR[95%CI]</i>	<i>OR[95%CI]</i>
Sex				
Male(r)	128[25.0]	384[75.0]	1.60[1.09, 2.36]	1.00
Female	54[34.8]	101[65.2]		1.96[1.18, 3.23]*
Residence				
Urban	74[24.0]	234[76.0]	0.74[0.52, 1.04]	
Rural	108[30.1]	251[69.9]		
Living arrangement				
Both biological parents(r)	28[17.5]	132[82.5]	1.00	1.00
One biological parent only	18[23.4]	59[76.6]	1.44[0.74, 2.80]	1.19[0.45, 3.15]
Friends	58[30.7]	131[69.3]	2.09[1.25, 3.48]*	3.16[1.66, 5.00]*
Alone	30[31.9]	64[68.1]	2.21[1.22, 4.01]*	2.15[1.04, 4.46]*
Relatives	48[32.7]	99[67.3]	2.29[1.34, 3.90]*	2.52[1.28, 4.95]*
Ever had sex				
Yes	60[34.9]	112[65.1]	1.64[1.13, 2.38]*	1.29[0.81, 2.07]
No(r)	122[24.6]	373[75.4]		1.00
Ever consumed khat				
Yes	86[25.2]	255[74.8]	0.81[0.57, 1.14]	
No	96[29.4]	230[70.6]		
Ever consumed alcohol				
Yes	136[26.5]	377[73.5]	0.85[0.57, 1.26]	
No	46[29.9]	108[70.1]		
Rank in the class				
1-11(r)	76[23.2]	252[76.8]	1.49[1.04, 2.11]*	
12+	95[30.9]	212[69.1]		
Grade in E.G.S.L.C.E^a.				
1.8-2.5	24[8.7]	251[91.3]	1.78[1.08, 2.91]*	1.82[0.99, 3.33]
2.6-3.0	6[4.2]	138[95.8]	1.89[1.10, 3.25]*	1.93[1.01, 3.71]*
3.1-4.0(r)	-	11[100]	1.00	1.00
Family connectedness				
				0.96[0.94, 0.99]*

* = statistically significant.

^a= Ethiopian General Secondary School Leaving Certificate Examination.

5.3.6. Suicidal ideation and attempt

Forty-two (6.3%) students seriously considered suicide; 36(5.4%) made a plan, 39(5.8%; 95% CI =4.0, 7.6) attempted suicide in the past 12 months, 44(6.6%) reported suicide attempt at least once in their life time. More females (9%) than males (4.3%) and rural (7.2%) than urban (3.2%) students planned how they would attempt suicide [OR=0.45, 95%CI=0.23, 0.91 and OR=0.43, 95%CI=0.20, 0.91 respectively]. However, there was no significant difference by gender, living arrangement, religious attachment and residence for actual suicide attempt.

Among those who reported attempting suicide in the past 12 months 21(53.8%) resulted in injuries serious enough to require professional treatment. Suicide rates didn't differ significantly according to religious attachment. One hundred twenty two (18.3%) adolescents reported knowing a friend who had attempted suicide and 97 (14.5%) reported that they know someone among the family who had attempted suicide.

Controlling for observed covariates in multiple logistic regression, female gender, history of suicide attempt among friends and family members, being bored with life and the world around them and sexual activity continued to predict suicide attempt in the past 12 months (table12).

Table 12. Correlates of suicide attempt in the past 12 months, Dessie preparatory school, Ethiopia, 2004.

<i>Characteristics</i>	<i>Attempted suicide</i>		<i>Crude</i>	<i>Adjusted</i>
	<i>Yes (n, %)</i>	<i>no (n, %)</i>	<i>OR[95%CI]</i>	<i>OR[95%CI]</i>
Sex				
Male(r)	28[5.5]	487[94.5]	1.32[0.64, 2.72]	1.00
Female	11[7.1]	144[92.9]		2.60[1.05, 6.48]*
Residence				
Urban(r)	14[4.5]	294[95.5]	1.57[0.80, 3.08]	
Rural	25[7.0]	334[93.0]		
Living arrangement				
Both biological parents(r)	6[3.8]	154[96.3]	1.00	1.00
One biological parent	3[3.9]	74[96.1]	1.04[0.25, 4.28]	0.68[0.11, 4.15]
Friends	12[6.3]	177[93.7]	1.74[0.64, 4.75]	0.79[0.23, 2.64]
Alone	7[7.4]	87[92.6]	2.07[0.67, 6.34]	1.04[0.28, 3.91]
Relatives	11[7.5]	136[92.5]	2.08[0.75, 5.76]	1.65[0.49, 5.59]
Anyone in the family tried to kill themselves				
Yes	16[16.5]	81[83.5]	4.70[2.38, 9.27]*	2.59[1.09, 6.15]*
No(r)	23[4.0]	547[96.0]		1.00
Any of your friends tried to kill themselves				
Yes	19[15.6]	103[84.4]	4.84[2.50, 9.39]*	4.32[1.88, 9.94]*
No(r)	20[3.7]	525[96.3]		1.00
Ever had sex				
Yes	21[12.1]	151[87.8]	3.69[1.91, 7.10]*	3.00[1.27, 7.11]*
No(r)	18[3.6]	477[96.4]		1.00
Ever consumed alcohol				
Yes	14[9.1]	140[90.9]	1.95[0.99, 3.86]	
No(r)	25[4.9]	488[95.1]		
Ever consumed khat				
Yes	17[5.2]	309[94.8]	0.80[0.42, 1.53]	
No(r)	22[6.5]	319[93.5]		
Ever have any of the following in the past 3 months:				
Being worrisome, can't sleep or don't sleep well				
Yes	32[9.2]	315[90.8]	4.54[1.98, 10.45]*	1.85[0.61, 5.60]
No(r)	7[2.2]	313[97.8]		1.00
Mentally incoherent, moody and stressful				
Yes	33[9.1]	328[90.9]	5.03[2.08, 12.18]*	3.03[0.84, 10.98]
No(r)	6[2.0]	300[98.0]		1.00

Being bored with life and the world around you				
Yes	29[8.5]	312[91.5]	2.94[1.41, 6.13]*	2.59[1.04, 6.39]*
No(r)	10[3.1]	316[96.9]		1.00
Befuddled, having a headache with no obvious cause				
Yes				
No(r)	28[8.0]	321[92.0]	2.43[1.19, 4.98]*	0.95[0.38, 2.36]
	11[3.5]	307[96.5]		1.00
Perceived family connectedness				
				1.02[0.97, 1.07]

* = statistically significant.

Note. Except for gender and living arrangement, variables which were significantly associated in bivariate analyses were included in the logistic regression.

5.3.7. Reported actions adolescents would consider in extreme despair

Most students (94%, 627/667) reported that they will turn to somebody for help or keep the problem for themselves and let it cool off depending on the situation or nature of the problem.

There was no significant difference according to gender, living arrangement or residence. See table13.

Table 13. Reported actions that adolescents would consider in extreme despair, Dessie, Ethiopia, 2004.

Variable	N (%)
Turn to somebody for help	252[37.8]
Keep it to myself and let it cool off	139[20.8]
Commit suicide	11[1.6]
Depends on situation/nature of problems	144[21.6]
Turn to somebody for help or keep it for myself and let it cool off depending on the situation or nature of the problem	627[94.0]
No idea	26[3.5]

Note: Multiple responses are possible.

5.4. The link between sexual activity and psychosocial concerns

5.4.1. Sexual activity and depressive symptoms

Forty nine (31.8%) boys who are sexually active reported that they felt so sad or hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities. By contrast, 79 (22%) boys who are not sexually active reported the same symptom [OR=1.6, 95%CI= 1.1, 2.5].

More (59.7%, 92/154) boys who are sexually active than sexually inactive (48.6%, 174/358) reported being bored with life and the world around them [OR=1.6, 95%CI=1.1, 2.3]

Thus, sexually active boys are one and half times more likely to have depressive symptoms than boys who are not sexually active.

Eleven (61.1%) teen girls who are sexually active reported that they felt so sad or hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities. By contrast, 43 (31%) girls who are not sexually active reported that they felt so sad or hopeless almost everyday for two weeks or more in a row that they stopped doing some usual activities [OR=3.4, 95%CI 1.2, 9.5].

More (77.8%, 14/18) sexually active females reported being mentally incoherent, moody and stressful as compared to sexually inactive girls (47.4%, 65/137) [OR=3.9, 1.2, 12.4].

Thus, sexually active girls are more than three times as likely to have depressive symptoms as girls who are not sexually active. Overall, for either gender, teens who are sexually active reported more depressive symptoms.

However, the association between sexual activity and depressive symptoms disappeared when other covariates were introduced in the logistic regression.

5.4.2. Sexual activity and attempted Suicide

Eighteen (11.7%) boys who are sexually active report having attempted suicide in the past 12 months before the survey. By contrast, 10(2.8%) of sexually inactive boys have attempted suicide [OR=4.6, 95%CI, 2.1, 10.2].

Thus, sexually active boys are more than four times as likely to attempt suicide, as are those who are not sexually inactive.

Among girls, 3(16.7%) of those who are sexually active have attempted suicide. By contrast, 8(5.8%) of girls who are not sexually active have attempted suicide [OR=3.2. 95%CI, 0.77, 13.5].

To account for other social background factors, logistic regression was run. However, the introduction of these factors virtually had no effect on the relation between sexual activity and attempted suicide (see table 12).

6. Discussion

The study revealed that sexual activity among in-school adolescents was associated with older age, living with friends, consumption of alcohol, less perceived family connectedness and parental monitoring, having peer pressure and friends who are sexually active.

First we examine whether differences in living arrangement affect teenagers' sexual activity. The findings of this study confirm the primary hypothesis that sexual activity is more common among adolescents from rural areas who are likely to have a living arrangement other than both biological parents. In accordance with earlier findings, teenagers of either sex living with both biological parents were found to be far less likely to report sexual activity^{83,84}. Carolyn A. Smith reported that coming from home without two biological parents present increased the probability of early intercourse among boys and girls⁸⁵.

The rate of reported sexual activity in this study corroborates with some of previous studies^{74, 82} but lower than other reports⁸⁶. A full quarter of participants reported to be sexually active. It is believed that young adolescents often underreport their sexual experiences⁸⁷. To partially account for this problem, respondents were asked whether their best friend had ever had sex because young people are likely to be more candid in providing information about their friends' behavior than about their own. As expected, students generally reported a significantly higher proportion of sexual activity than what they have reported for their own behavior. This was true for both sexes and age groups. Results of the peer-to-peer interview also strengthened this possibility. This finding constitutes possible indirect evidence that some underreporting of sexual activity exists among boys and girls.

Mean age at sexual debut didn't differ significantly according to gender; however, females were more likely to have older sexual partners, on average by five years. This is consistent with earlier findings from Ethiopia and elsewhere ^{74, 82}. Such sexual mixing of younger female adolescents with older men who are likely to have higher risk of HIV infection might put teen girls at a greater risk. The negotiation power of younger girls to use condom with older partners might also be limited.

Survey findings indicate that knowledge of students about sexual and reproductive health issues is generally unsatisfactory for either sex. As demonstrated in several studies reproductive health knowledge was not found to be a significant predictor of sexual behavior in this study ⁸⁸.

Contrary to the common belief, rural adolescents reported a significantly better knowledge about pregnancy, ways of preventing HIV infection and sexually transmitted diseases. Findings from the focus group discussion also showed that most urban students considered themselves to be more knowledgeable about issues related to sexuality. This discrepancy could partly be explained by the differences in sources of information about sexuality and people who are thought to be reliable by rural and urban adolescents.

A significantly higher proportion of rural adolescents reported that they discuss with and rely on health practitioners and teachers to get information regarding sexuality and HIV/AIDS who are believed to be better sources in terms of providing more accurate information. However, as in prior research, the better knowledge among rural students didn't translate in to safe sexual

behavior as evidenced by the significantly less likelihood of consistent condom use with commercial sexual workers⁸⁹.

The seemingly paradoxical association between better knowledge about sexually transmitted diseases and sexual activity could also be explained by what students suggested in focus groups. Participants commented that adolescents with better reproductive health knowledge are likely to engage in more risky sexual activity because they think that they can handle the risks of unwanted pregnancy and HIV infection.

Many adolescent health initiatives focus solely upon the acquisition of sexual and reproductive health knowledge⁸⁸. However, such knowledge failed to differentiate between those who engage in sexual activity and unprotected sex and those who do not. This study thus suggests that although increasing adolescents' understanding of risky behavior and prevention strategies is important and necessary, often it is not sufficient to prevent significant numbers from experiencing the consequences of engaging in such behavior.

One encouraging finding of this survey is the fact that adolescents of either sex identified health practitioners and teachers more frequently than peers as sources of sexuality information. This is in contrast to some of the previous studies which cited peers as the most reliable source of information by adolescents⁷⁶. It is obvious that health practitioners and teachers could give more accurate information as compared to peers who themselves are likely to have inadequate knowledge.

The study's findings concerning the powerful effects that peer pressure and peer behavior (actual or perceived) have on young people are worthy of note. We found that adolescents who claimed to have peer pressure and have friends who were sexually experienced were more likely to report sexual activity. More peer pressure was also reported by adolescents living alone, with their friends or one biological parent as compared to those living with both biological parents.

As in prior research, males and rural students were more susceptible to peer influence ⁸⁴. Although we can't determine from the cross-sectional data available for this study whether preparatory school youth are influenced by other youth or self-select into networks of youth who engage in sexual activity, the importance of peer influence in shaping adolescent behavior is widely recognized. ⁸⁸ Thus, on the basis of this and other research, health programs for adolescents would be well advised to incorporate strategies that focus on peers. What makes this study more informative is that living arrangement was found to have an important mediating effect on the influence of peer behavior.

The role that parents play in influencing adolescent behavior also merits attention. The feeling of being connected to parents was observed to be protective against being sexually active for girls and boys. Parent-teen connectedness has emerged in recent research as a compelling "super-protector"- a feature of family life that may buffer young people from the many challenges and risks facing them in today's world. There is a marked consistency in this body of about two dozen of studies; all but a few indicate that parent-child closeness acts as a protective factor for the prevention of a variety of health and social problems (whether the outcome of interest is overall adjustment and functioning, substance use, sexual behavior, STI/HIV, suicide, conduct

disorder or violence). Parent-teen connectedness is associated with reduced adolescent pregnancy risk through teens remaining sexually abstinent, postponing intercourse, having fewer sexual partners, or using contraception more consistently⁶.

Furthermore, our findings indicate that perceived family connectedness do not differ significantly whether adolescents live with or away from families. This is in accordance with an earlier study which indicates that the maintenance of physical proximity to parents is less essential for older children (adolescents) due to more sophisticated coping mechanisms, but that the availability of the attachment figure remains important⁸⁹.

The findings extend previous research documenting an increased prevalence of health risk behaviors among adolescents with less perceived parental monitoring³¹. Less perceived parental monitoring was associated with male sex, being rural student, living alone and with friends (as compared to those living with both biologic parents), sexual activity, consumption of khat and alcohol and having peers who are sexually experienced. This is consistent with most of the evidence in the international literature which shows that parental supervision and monitoring of adolescents is an important relationship dimension related to teens' sexual behavior. More specifically parental monitoring of teens is associated with teens not having intercourse, having a later sexual debut and having fewer sexual partners. Parental monitoring might also reduce teen pregnancy indirectly by decreasing teens' association with high-risk peers, and by lowering teen alcohol and khat use, thereby decreasing teenagers' unprotected sexual intercourse³¹.

Parent-adolescent communication was another dimension in family relationship that was investigated in this research. The data showed that there was no association between Parent-adolescent communication and sexual activity. Results across more than 30 studies that examined the impact of this dimension are so variable and discrepant that no simple, direct effect is discernible. There is little or no agreement between what parents and teens perceive to have been communicated between them and there is no consistency in findings about whether parents' or teens' reports of their communication produce significant results ⁸⁸.

The current study found that condom utilization is generally low regardless of living arrangement, residence and gender. In view of the high prevalence of HIV infection amongst this age group⁷⁵, the magnitude of unsafe sexual behavior is particularly worrisome.

The differential vulnerability of adolescents has become more clear from the pyramid of sexual risk behaviors. It was evident that adolescents living with neither of their parents, rural adolescents and those who perceived less parental monitoring constituted the major proportion of the higher risk categories. The proportion of students who fall in the high and at risk categories is lower than what has been found by an earlier study done among Addis Ababa youth ⁹⁰. This might have resulted from the difference in levels of sexual risk behaviors between in-school and out-of-school adolescents, as the study by Negussie et al ⁸⁹ also reported that a significantly higher proportion of students in the high and at risk categories were out-of-school youth.

This study extends knowledge in the area of co-occurrence of health risk behaviors ⁹². Understanding of this kind of patterned susceptibility is of vital importance to differentiate target

groups requiring urgent and comprehensive intervention from those who mainly need basic information and supportive family environment. In countries like Ethiopia where resources are relatively limited such a differential approach has important program implications.

The present study revealed that a substantial proportion of adolescents in preparatory school have multifaceted psychosocial problems. More than half of the respondents reported feeling lonely and depressed at least once in the past three months. A similar proportion of adolescents also reported experiencing a feeling of being worrisome and bored with life and the world around them in the past three months. This finding is grossly comparable with a study by G/mariam A. among in-school students in Jimma who reported that close to half of respondents stated to have one or more emotional problems as their source of concern ⁹¹.

Consistent with the secondary hypothesis students living with both biological parents were generally found to fare better than their counterparts living with one biological parent only, friends or alone. Specifically our analysis of the relationship between teenagers' living arrangements and most important concerns of adolescents and depressive symptoms shows that teenagers living with both biological parents have the most favorable outcomes. Previous research on the effects of living arrangements on adolescent health outcomes has shown that, in general, adolescents living with both biological parents exhibit the lowest rates of behavioral problems ⁹².

The rates of suicide attempt reported in this study are consistent with some of previous findings ⁹³; but, generally lower than some other surveys conducted in Ethiopia ⁹⁴ and elsewhere ⁹⁵. A

study among high school students in Addis Ababa by Dereje K. and Tigist K.⁹⁴ reported a lifetime prevalence of suicide attempt of 14.3% in contrast to 6.6% in the present study. The fact that our study was restricted to preparatory school youth who have better academic achievement and possibly more hope to join higher institutions might have contributed to the lower prevalence of suicide attempt in the present survey.

In this study a history of suicide among family members and friends, sexual activity, female gender and some depressive symptoms were found to be strong predictors of suicide attempt. This is in accordance with most findings regarding adolescent suicide attempt⁶⁻⁹.

The female preponderance in depressive symptoms (one of the risk factor for suicide attempt) and suicide attempt is consistent with most literatures worldwide⁹⁷, but in contrary to some of the previous reports from Ethiopia⁹⁵. Girls are generally more prone to outcomes often referred to as ‘internalized or quiet’- such as depression. Boys on the other hand, are prone to react to difficulties by ‘externalizing’- acting out, being aggressive, and the like⁹⁷.

Our study didn’t show association between residence, living arrangement, alcohol drinking, khat chewing and suicide attempt. The relatively small number of students who have reported attempting suicide might have contributed to the lack of association with these variables.

Consistent with prior research findings⁴¹, having a better family connectedness was found to be protective against depressive symptoms and suicidal thought. Less secure attachment to parents may contribute to the development of depressive symptoms among young adolescents. Hence

improving the adolescent-parent relationship could be a focus of interventions both in community service and in clinical work.

Close to half of the respondents reported 'khat' chewing (an amphetamine-like substance) and nearly a quarter reported consuming alcohol. These figures are alarming particularly in view of the evidences that show that 'khat' chewing and alcohol consumption are related to an increased risk of HIV infection ⁹⁷.

One noteworthy finding is that teens' sexual activity was found to be associated with suicide attempt even after other potential confounders were controlled. While the association is clear, establishing the temporal relationship is difficult from such cross sectional study. A study that examined this link by Robert et al suggested early sexual activity leading to emotional distress and reduced happiness as the most likely explanation ⁹⁹.

However, theoretical questions about whether sexual activity is the consequence rather than a risk factor for suicide attempt should not distract from the clear message that should be delivered to teens. Teens should be told that sexual activity in teen years is clearly linked to suicide attempt. In light of this, it is advisable to strengthen abstinence education programs emphasizing the importance of delaying sexual activity, and that human sexual relationships are predominantly emotional and moral rather than physical in character.

7. Strengths and limitations of the study

7. 1. Strengths

The strengths of this study are its articulation of hypotheses, inclusion of students of both sexes, use of items from validated survey instruments, and adaptation of materials to the Ethiopian context.

Participation of students was also generally satisfactory.

Qualitative data was gathered to explain some of the results from questionnaire interview and check for consistency of responses.

The present study tried to address the magnitude of and the relationship between two areas of great concern in adolescent health –sexual and mental health issues simultaneously.

7.2. Limitations

Because the study was undertaken among preparatory school students of the same grade other important protective factors such as being in-school, attaining higher levels of education and academic performance are likely to have been obscured.

It is possible that unmeasured characteristics of the family (other than living arrangement, family connectedness, parental monitoring) affect adolescents' sexual behavior and psychosocial health.

The analysis is limited to only three outcomes; two addressing psychosocial health and one dealing with sexual behavior. The analysis is further constrained by the small number of students

who reported suicidal ideation and attempt particularly when we separate the population by gender and living arrangement.

Though supplemented with qualitative information from focus group discussions, the study is largely based on self reported behavior and concerns, and the data are thus subject to reporting errors of unknown magnitude.

Because the data are cross-sectional, the direction of causal relationship between variables can't always be determined. Further longitudinal studies are thus needed to disentangle causal relationship between certain variables.

In a country where less than twenty percent of the adolescent population attends secondary schools, the results can't be generalized to all adolescents nationwide.

Female students who are pregnant or have had babies typically leave school. Such drop out from school is likely to skew the female student population towards students who are sexually inactive.

8. Conclusion

Our study indicates that a substantial proportion of adolescents in preparatory school are sexually active.

Parent-teen connectedness, parental monitoring and living arrangement are significant predictors of sexual activity. A greater sense of connectedness to and monitoring by parents decreases the likelihood of sexual activity regardless of living arrangement, age, gender, peer influence, khat and alcohol consumption, and parental education.

Students with better family connectedness are more likely to use condom consistently.

Older age, having peer pressure to have sex and peers who are sexually experienced are also related to being sexually active.

The level of sexual and reproductive health knowledge that students have is generally unsatisfactory and has not been associated with being sexually abstinent and condom use.

Communication on sexuality issues is not associated with safe sexual behavior.

Mass media was the dominant source of information regarding issues related to sexuality and HIV/AIDS.

Most adolescents rely on health practitioners and teachers to get information and guidance on issues related to sexuality and HIV/AIDS.

Alcohol and khat consumption are high particularly among males; the former being related to sexual activity.

Males, rural students and those who have a living arrangement other than both biological parents are more susceptible to peer pressure.

High perceived parental monitoring is linked to less likelihood of having peers who are sexually experienced and consuming alcohol and khat.

Sexual activity among rural students is particularly high and most of them use condom inconsistently despite better reproductive health knowledge.

The most commonly used contraceptive used both at sexual debut and last intercourse is condom but consistent use is generally low.

High perceived family connectedness is a significant protective factor against alcohol consumption, but not against khat chewing.

The burden of psychosocial concerns including depressive symptoms, suicidal ideation and suicide attempt is high.

Being a female, lower grade-point-average, having less family connectedness, and living with neither of the parents were found to be significant predictors of depressive symptoms.

Having a better family connectedness is linked to less likelihood of having suicidal thought.

Female gender, some depressive symptoms and history of suicide among families and friends were found to be important predictors of suicide attempt.

Teens' sexual activity appears to be related to suicide attempt regardless of gender, history of suicide among friends and family members.

The overall research findings indicate that living with both biological parents and good parent-teen connectedness are related to better psychosocial health and being sexually abstinent.

9. Recommendations

9.1. Implications for effective parenting

The evidence from this and other recent studies suggest that parents should be targeted more frequently in reproductive health intervention for adolescents.

- Parents need to recognize the continued importance of their relationship with their adolescent for adjustment, despite their child's increased interest in and time spent with peers. Parents need to be aware of and monitor their adolescents' involvement with various peer groups and their activities in school. Specifically parents should know that adolescents' perception of being connected to and monitored by parents are protective factors against unsafe sexual behavior, psychosocial problems and substance use (khat and alcohol use).
- Family interventions should also provide parents with guidance in how to balance adolescents' developmental challenge of establishing autonomy and their parental obligation to protect adolescents from harm. Parents may achieve this balance by imparting their values to their adolescents, keeping in mind that the goal of parental monitoring is to promote eventual self-regulatory behavior by the adolescent.

9.2. Implications for government programming

Government should support the following initiatives in mental health programming:

- Public education initiatives that enhance recognition and understanding of the importance of parent-teen relationship. Strategies to achieve this goal include media advertising campaigns and provision of information brochures through government agencies, public health offices and schools.
- Youth-serving agencies, churches, community organizations, and schools need to develop strategies that promote high levels of parent-teen-connectedness, encourage parent-child relationships that may help delay early sexual intercourse, protect teens against a variety of other adverse outcomes (including khat and alcohol consumption) and promote healthy adolescent development.
- In the face of limited resources youth programs need to first address the reproductive and psychological needs of adolescents belonging to higher risk categories who are predominantly rural students that live away from families.
- Development and evaluation of targeted programs that focus on attachment issues and effective parenting strategies for high-risk adolescents and their families.
- Findings from this study reveal significant gender differences in peer influence, psychosocial concerns, perceived parental monitoring and perception of social norms and values. Thus, acknowledging such gender differences in the design of youth programs may be a prerequisite for their success.

9.3. Implications for research initiatives

- Future researches need to address the impact of familial influences specifically parent-teen connectedness, parental monitoring and communication as one point of intervention to reduce adolescents' risk behaviors.
- Development and validation of self report, observational and/or interview based measure of family connectedness for adolescents.
- The link between sexual activity and psychosocial problems needs further investigation with particular emphasis on establishing the temporal relationship using longitudinal study designs.

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Annex-I

Survey Instruments

Questionnaire on Adolescents' sexual risk behavior and psychosocial problems In Dessie Preparatory School, Ethiopia.

Questionnaire Serial no. _____

Confidentiality and Consent

Dear respondent,

We are interested in learning more about your psychosocial concerns, perceptions, feelings and practices related to your sexual and reproductive health.

This questionnaire is designed for a research work approved by Addis Ababa University (Department of community health) to be conducted in partial fulfillment of a masters degree in public health.

We hope you will help us by completing this survey. None of your answers will be available to anyone at anytime. All the information you give us will be kept private. Do not put your name anywhere on this questionnaire. If you decide not to participate or complete the form, you may end filling the questionnaire anytime you want to.

However, we really need your honest response to better understand the impact of parental attachment and rural-urban migration on sexual risk behaviors and psychosocial problems of youth in preparatory schools in Ethiopia.

The results of the study would hopefully serve as an important input to intervention programs that aim at improving adolescent health in general and students in preparatory school in particular.

It will take you 40-45 minutes to complete the whole questionnaire.

We thank you in advance for taking your time to respond to our questions!

Would you be willing to participate in the study? **Agree** **Disagree**

If you decide not to participate in the study, please return the questionnaire to the supervisor/investigator.

Part 1. Background Characteristics

1.1. Age (in years)_____ (write the number in the space provided)

Please check one.

1.2. Sex: Male___01 Female___02

1.3. Religion: Orthodox ___01 Catholic___04
Muslim ___02 Others (specify) ___11
Protestant___03

1.4. Are you permanent resident in this town (Dessie)?
Yes___01 [Go to 1.7]
No, I came from surrounding areas. ___02

1.5. Just before you moved here, where did you live?
_____ Town (Around ___Kms from Dessie)

1.6. How frequently do you visit your parents/families?
Not at all___01
Only during vacations (i.e. every 6 months) ___02
Often, once every 2-4 months___03
Very often, at least once every month. ___04

1.7. With whom do you live now?
I live with both of my parents ___01
I live with my mother only___02
I live with my father only___03
I live with brothers/sisters___04
I live with grandparents___05
I live with cousins___06
I live with mother/father and a stepfather or stepmother___07
I live with my friends___08
I live alone___09
Others (specify)_____11

1.8. Attachment to religious institutions
Attends frequently (more than twice a month) ___01
Seldom attends (less than or equal to twice a month) ___02
Not religious___03

1.9. Are you married?
Yes___01 No ___02

1.10. Educational status of your mother:
Illiterate (can't read or write)___01[Go to 1.12]
Literate ___02

1.11. If literate, specify level of her education_____

1.12. Educational status of your father:
Illiterate (can't read or write)___01[Go to 1.14]
Literate ___02

1.13. If literate, specify level of his education_____

1.14. What was your last year's rank in the class_____

- 1.15. What was your grade in the E.G.S.L.C.E. _____
- 1.16. Have you ever consumed 'Khat'?
- No ___ 01
- Occasionally ___ 02
- Regularly, 2-4 times per month on average ___ 03
- Regularly, 5 times per month or more on the average ___ 04
1. 17. Have you ever consumed alcohol?
- No ___ 01
- Occasionally ___ 02
- Regularly, 2-4 times per month on average ___ 03
- Regularly, 5 times per month or more on the average ___ 04

Part 2. Sexual and Reproductive health knowledge

Circle all that are possible.

2.1. During which times of the monthly cycle does a woman have the greatest chance of becoming pregnant?

	Yes	No
During her period	01	02
In the middle of her cycle	01	02
Right after her period has ended	01	02
Just before her period begins	01	02
Other (Specify _____)		22
Don't know/don't remember		23

2.2. How can people protect themselves from getting AIDS?

- Avoid sexual intercourse (don't play sex) ___ 01
- Have faithful one-to-one relationship with uninfected partner _____ 02
- Use condoms during sex _____ 03
- Sterilize syringes/needles _____ 04
- Avoid sexual contact with sex workers (prostitutes) _____ 05
- Avoid sharing cutting & piercing materials _____ 06
- Take antibiotics prior to sexual intercourse _____ 07
- I don't know _____ 22
- Other (please specify) _____ 23

Please check only one.

	Agree 01	Disagree 02	Don't know 23
2.3. A woman who has HIV can give birth to a child with HIV.			
2.4. A girl Can get pregnant before she experiences her first menstruation?			
2.5. A person can have a sexually transmitted disease (STD) with out knowing it			

PART 3. PERCEIVED CONNECTEDNESS TO FAMILIES

Below are some questions about your perceived closeness to parents/families.
Please check only one box that best describes your feeling.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Not applicable
	1	2	3	4	5	6	7
3.1. I feel close to my mother							
3.2. My mother cares about me							
3.3. My mother is warm and loving towards me							
3.4. I am happy with my relationship with my mother							
3.5. My mother and I are close to each other							
3.6. I feel close to my father							
3.7. My father cares about me							
3.8. My father is warm and loving towards me							
3.9. I am happy with my relationship with my father							
3.10. My father and I are close to each other							

Part 4. COMMUNICATION ON SEXUALITY AND HIV/AIDS

Please check one below.

4.1. Have you ever discussed about sexuality and/or HIV/AIDS with other people?

Yes ___01

No ___02 (go to 4.3)

Circle all that are possible.

4.2. Whom do you discuss with?

Mother ___01

Father ___02

Brother/Sister ___03

Other family member ___04

Friend of the same sex ___05

Friend of the opposite sex ___06

boy/girl friend ___07

Teacher ___08

Health practitioner ___09

Other (specify) ___44

4.3. In general, what has been your most important source of information about AIDS or HIV?

(Where or from whom have you learned the most about AIDS?)

Teacher/school AIDS clubs ___01

Friends ___02

Mass media (radio, TV, newspapers) ___03

Family ___04

Health practitioner ___05

Books/films ___06

other (specify) ___44

don't know ___08

4.4. Whom do you rely to get information and guidance about sexuality and HIV/AIDS?

Mother ___01

Father ___02

Brother/Sister ___03

Other family member ___04

Friend of the same sex ___05

Friend of the opposite sex ___06

Teacher/school AIDS clubs ___07

Health practitioner ___08

Books/films ___09

Other (specify) ___44

Part 5. SOCIAL NORMS and GENDER ROLES

A. Social Norms

Please check one.

- 5.1. The knowledge of contraceptives by young people encourages them to have sex with many people.
 Agree ___01 Disagree ___02 DK ___03
- 5.2. Having a baby when you are in high school
 Is not a problem at all ___01
 Is not a problem because your family helps ___02
 Is a problem but it's okay ___03
 Is a problem for the mother and the baby but not for the father of the baby ___04
 Is a problem for the mother, the baby, and the father of the baby ___05

B. Sexual Values and Choices

	Strongly agree	Agree	Not	Disagree	Strongly Disagree
	5	4	3	2	1
5.3. It is against my values for me to have sex while I am a teenager.					
5.4. If I have sex while I'm a teenager, it would make me feel sort of important.					

C. Gender Roles

- 5.5. Who do you think should handle family expenditures, husband or wife?
 Father/husband ___01
 Mother/wife ___02
 Both (husband and wife) together ___03
- 5.6. How important is it for a woman to be a virgin until she gets married? Would you say it is:
 Very important ___01 Important ___02 Not important ___03
- 5.7. How important is it for a man to be a virgin until he gets married? Would you say it is:
 Very important ___01 Important ___02 Not important ___03

PART 6. PERCEIVED PARENTAL MONITORING

	Never	Rarely	Some of the times	Most of the times	Almost always
	01	02	03	04	05
6.1. Your parents know where you are when not at school and away from home					
6.2. Your parents know who you were with when not at school and away from home					

PART 7. Peer Influence and peer behaviour

- 7.1. Is there pressure from your friends for you to have sexual intercourse?
 No pressure at all ___01
 A little pressure ___02
 A moderate amount of pressure ___03
 A lot of pressure ___04

- 7.2. About how many of your friends have had sexual intercourse?
 None of them___01
 A few of them___02
 About half of them___03
 Most of them___04
 All of them___05
- 7.3. Now think of your best friend. Has he/she ever played sex?
 No___01 Yes___02 DK___03
- 7.4. Do you know of any sexual intercourse with prostitutes among your male close friends?
 Yes___01 no___02 DK___03

Part 8. SEXUAL BEHAVIOR AND PRACTICES

Sometimes young people play sex. They play sex for different reasons - for love, for urges, or because they are convinced, forced or tricked. Please check one below.

- 8.1. Have you ever had sexual intercourse?
 Yes ___01 No___02 (**Go to Part 10**)
- 8.2. How old were you when you first had sexual intercourse?
 ___ Age (**write the number in the space provided**)
 Doesn't know age___99
- 8.3. How old was the person with whom you first played sex?
 ___ Age (**write the number in the space provided**)
 Doesn't know age___99
- 8.4. Was this person a husband, a boy/girlfriend, a family member, a teacher, a stranger, or someone else?
 Husband___01 Teacher ___04
 Boy/girlfriend___02 Stranger___05
 Family member___03 Other person (specify)___88
- 8.5. When you played sex the first time, had you/your partner consumed any alcohol or used 'khat', or any other drug beforehand?
 Yes___01 No___02 DK___03
- 8.6. Thinking back over your lifetime until now, with how many people have you ever played sex?
 ___ Number of partner (**write the number in the space provided**)
 Does not remember___99
- 8.7. How many different partners have you had sexual intercourse with in the last 03 months?
 Zero___00 Three___03
 One___01 more than three___04
 Two___02
- 8.8. The first time you had sex before marriage; did you or your partner use any contraceptives?
 Yes___01 No___02 (**go to 8.10**)
- 8.9. What method did you use at the first sexual intercourse?
 Condom___01 Withdrawal___04
 Pills___02 Foam (tablets, aerosol) ___05
 Rhythm___03 Other (specify)_____88
- 8.10. The last time you had sex with your partner; did you or your partner use any contraceptives?
 Yes___01 No___02 (**go to 8.12**)

- 8.11. What method did you use at the last sexual intercourse?
 Condom___01 Withdrawal___04
 Pills___02 Foam (tablets, aerosol) ___05
 Rhythm___03 Other (specify)_____88
- 8.12. Are you currently using any method to prevent AIDS or STDs?
 Yes___01 No___02 (**go to part 9**)
- 8.13. Which method or methods are you currently using to prevent AIDS or STDs?
 Condoms___01 Don't know___04
 Abstinence___02 Other(specify)___88
 Faithful one-to-one relationship___03
- 8.14. How often do you use a condom with your partner?
 Sometimes___01 Always___03
 Most of the time___02 Don't know___04
- 8.15. [For males only] Have you ever had sexual intercourse with a female commercial sex worker?
 Yes___01 No___02 [**Go to Part 9**]
- 8.16. If the answer is yes, how often did you use condom?
 Not at all___01 Always___03
 Sometimes___02 Don't know___04
 Most of the time___03

PART 9. COERCION

- 9.1. The first time you had sexual intercourse, did you agree willingly, did it just happen, or were you tricked, threatened or forced?
 Played sex willingly (wanted) ___01
 Forced___02
 Convinced with money or gifts___03
 Given drugs and alcohol ___04
 Felt threatened___05
 Other (please specify)_____99
- 9.2. [**For females only**] Thinking back over your lifetime how many coercive sex partners have you ever had?
 Zero___01 Two___03
 One___02 Three or more___04
 Don't remember___05
- 9.3. [**For females only**] Have you ever received anything in exchange for sex?
 Yes___01 No___02(**go to part 9**)
 Don't remember___03 (**go to part 9**)
- 9.4. [**For females only**] What did you receive?
 Money___01
 School fee___02
 Shelter/rent___03
 Gifts (specify)_____04
 Other (specify)_____ 99

PART 10. PSYCHOSOCIAL CONCERNS

Please think about each issue and see how much they affect you: whether it affects you very much, just a little, or not at all. Check only one for each question.

		Not at all 01	A little 02	Very much 03	Dk 04
10.1	Lack of parental support				
10.2	Who pays for your school or other fees including rent for housing?				
10.3	Risk of unplanned pregnancy				
10.4	Sexually transmitted disease including HIV/AIDS				
10.5	Feeling pressured to get married.				

For the following items, rate these statements on a scale of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, and 5 being strongly agree:

10.6. Satisfaction with Social Relationships

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	05	04	03	02	01
I am very happy with my friendships					
I don't have enough friends					
My friendships are not as good as I would like them to be					
I wish my friendships were better					
I feel good having as many friends as I have					

10.7. Self Esteem

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	05	04	03	02	01
Overall, I am satisfied with myself					
I feel I do not have much to be proud of					
At times I think I'm no good at all					
I feel that I have many good personal qualities					
I wish I had more respect for myself					

10.8. Who is the person in your immediate environment that you would consider to be a role model for you?

- | | |
|--------------------------|-------------------------|
| Parent/parent-figure__01 | same-sex friend__05 |
| Other adult relative__02 | Opposite sex friend__06 |
| Sibling__03 | Older friend/senior 07 |
| Teacher__04 | Other (specify) _____08 |

10.9. In the past 3 months did you ever have any of the following?

	No	1 to 3times	4 to 6times	>6 times
	1	2	3	4
Feeling lonely, depressed				
Being worrisome, can't sleep or don't sleep well				
Mentally incoherent, moody and stressful				
Being bored with life and the world around you				
Befuddled, having a headache with no obvious cause				

The next 5 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life.

10.10. During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

Yes ___01 no ___02

10.11. During the past 12 months, did you ever seriously consider attempting suicide?

Yes ___01 no ___02

10.12. During the past 12 months, did you make a plan about how you would attempt suicide?

Yes ___01 no ___02

10.13. During the past 12 months, how many times did you actually attempt suicide?

0 times ___01 2 or 3 times ___03
1 time ___02 4 or 5 times ___04 6 or more times ___05

10.14. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

I did not attempt suicide during the past 12 months ___01
Yes ___02 No ___03

10.15. Has anyone in your family ever tried to kill themselves?

No ___01 Yes, and he/she lived ___02 Yes, and they died ___03

10.16. Have any of your friends ever tried to kill themselves?

No ___01 Yes, and he/she lived ___02 Yes, and he/she died ___03

10.17. Have you ever tried to kill yourself (commit suicide)?

No ___01 Yes, once ___02 Yes, more than once ___03

10.18. When was the last time you tried to kill yourself?

I never tried to kill myself ___01
I tried within the last 6 months ___02
I tried within the past year ___03
I tried more than a year ago ___04

10.19. I worry about...

	Not at all 01	Somewhat 02	A lot 03
My own drinking and 'Khat' use			
Being sexually abused			
Getting AIDS			
Getting a job when I'm older			
Other (specify) _____			

10.20. Read the following list of issues and select the most important concerns in your life at the moment. List concerns in order of importance from 1-10:

- | | |
|-------------|------------------------|
| School___ | Rape___ |
| Job___ | Drugs___ |
| Money___ | Pregnancy___ |
| Religion___ | AIDS___ |
| Crime___ | Other (specify): _____ |

10.21. Suppose you were in extreme despair (whatever would the reasons be), would you consider the following actions?

- | | |
|---|----|
| Turn to somebody for help | 01 |
| Keep it to myself and let it cool off | 02 |
| Commit suicide | 03 |
| Depends on situation/nature of problems | 04 |
| No idea/not applicable | 05 |

Thank you!

ክፍል 1 አጠቃላይ መረጃ

1.1 ዕድሜ (በአመት) _____ (ቁጥሩን በተሰጠው ቦታ ጻፍ/ፊ)

ከዚህ በታች ላሉት ጥያቄዎች አንዱን ምርጫ አክብብ/ቢ

1.2 ጾታ
ወንድ ___01 ሴት ___ 02

1.3 ኃይማኖት
አርቶዶክስ ክርስቲያን ___01 ሙስሊም ___02 ፕሮቴስታንት ___03
ካቶሊክ ___04 ሌላ (ይጠቀስ) _____ 11

1.4 እዚህ ከተማ (ደሴ) ቁጫ ነዋሪ ነህ/ሽ?
አዎ ___ 01 (መልሱ አዎ ከሆነ ወደ 1.7 እለፍ/ፊ)
የለም፣ በአከባቢው ካሉ ቦታዎች ነው የመጣሁት ___02

1.5 እዚህ ከመምጣትህ/ሽ በፊት የት ትኖር/ሪ ነበር?
_____ ከተማ/መንደር [በግምት _____ ኪ.ሜ ከደሴ ይሆናል]

1.6 ምን ያህል ጊዜ ወደ ቤተሰቦችህ/ሽ ጋር ትሄዳለህ/ትሄጃለሽ?
በጭራሽ አልሄድም ___01
በአረፍት ጊዜ ብቻ (ማለትም በየ6 ወሩ) ___02
ከ2-4 ወራት ባለው አንድ ጊዜ ___03
ቢያንስ በወር አንድ ጊዜ ___04

1.7 በአሁኑ ጊዜ ከማን ጋር ነው የምትኖረው/የምትኖረው?
ከሁለቱም ወላጆቼ ጋር ___ 01
ከእናቱ ጋር ብቻ ___ 02
ከአባቱ ጋር ብቻ ___ 03
ከእህቴ/ወንድሜ ጋር ___ 04
ከአያቶቼ ጋር ___ 05
ከአጎት/አክስቴ ጋር ___ 06
ከእናቱ/አባቱ እና ከእንጆራ አባቴ/እንጆራ እናቱ ጋር ___07
ከጊደኞቼ ጋር ___ 08
ብቻዬን ___09
ሌላ (ይጠቀስ) ___11

1.8 ከኃይማኖታዊ ተቋማት ጋር ያለህ/ሽ ቅርብነት፡
ብዙ ጊዜ እሳተፋለሁ [በወር ከ2 ጊዜ በላይ] ___01
አልፎ አልፎ እሳተፋለሁ [በወር 1 ጊዜ ወይም ከዚያ በታች] ___02
ኃይማኖታዊ አይደለሁም ___03

1.9 አግብተኛ/አግብተኛል?
አዎ ___ 01
አላገባሁም ___02

1.10 የእናትህ/ሽ የትምህርት ደረጃ፡
ምንም አልተማሩም ___ 01 [ወደ 1.12 እለፍ/ፊ]
ተምረዋል ___ 02

1.11 የተማሩ ከሆነ የትምህርት ደረጃቸውን ግለጽ/ጭ _____

1.12 የአባትህ/ሽ የትምህርት ደረጃ፡
ምንም አልተማሩም [ማንበብና መጻፍ አይችሉም] ___ 01 [ወደ 1.14 እለፍ/ፊ]
ተምረዋል ___ 02

- 1.13 የተማሩ ከሆነ የትምህርት ደረጃቸውን ግለጽ/ጭ _____
- 1.14 በአለፈው ዓመት ከክፍል ተማሪዎችህ/ሽ ውስጥ ስንተኛ ወጣህ/ሽ? ____ኛ
- 1.15 በ10ኛ ክፍል የመልቀቂያ ፈተና የነበረህ/ሽ ውጤት ስንት ነው? ____
- 1.16 አልኮል ያለው መጠጥ ጠጥተህ/ሽ ታውቃለህ/ታውቂያለሽ? (ጠላን ጨምሮ)
 የለም ____01
 አልፎ አልፎ ____02
 በአማካኝ በወር ከ2-4 ጊዜ ____ 03
 በአማካኝ በወር 5 ጊዜ ወይም ከዚያ በላይ ____04
- 1.17 ጫት ቅመህ/ሽ ታውቃለህ/ታውቂያለሽ?
 የለም ____ 01
 አልፎ አልፎ ____02
 በአማካኝ በወር ከ2-4 ጊዜ ____ 03
 በአማካኝ በወር 5 ጊዜ ወይም ከዚያ በላይ ____04

ክፍል 2 የስነ ተዋልዶ ጤና ዕውቀት/ግንዛቤ

መልስ ሊሆኑ የሚችሉ አማራጮችን በሙሉ አክብብሱ።

2.1 አንድ ሴት የማርገዝ ዕድህ በጣም ከፍተኛ የሚሆነው በየትኛው የወር አበባ ዑደት ጊዜ ነው?

	አዎ	የለም
በወር አበባ ጊዜ	01	02
በወር አበባ ዑደት አማካኝ (መሀከል) ጊዜ	01	02
የወር አበባ ከቆመ በኋላ ባለው ጊዜ	01	02
ልክ የወር አበባ ከመጀመሩ በፊት ባለው ጊዜ	01	02
ሌላ (ይጠቀስ) _____		22
አላውቅም/አላስታውስም		23

- 2.2 ሰዎች ራሳቸውን ከኤች አይ ቪ/ኤድስ እንዴት መከላከል ይችላሉ?
 የግብረ-ስጋ ግንኙነት ባለማድረግ ____01
 አንድ ለአንድ በመወሰን ____02
 በወሲብ ጊዜ ኮንዶም በመጠቀም ____03
 መርፌዎችን በመቀቀል/በአደስ መርፌ በመጠቀም ____04
 ከሴተኛ አዳሪዎች ጋር የግብረ-ስጋ ግንኙነት ባለማድረግ ____05
 ስለቶችን (ምሳጭ፣ ጥፍር መቁረጫ ወዘተ....) ባለመጋራት ____06
 ከግብረ-ስጋ ግንኙነት በፊት ፀረ ማይክሮብ መድኃኒት በመውሰድ ____07
 ሌላ (ይጠቀስ) _____ 22
 አላውቅም ____23

ለሚከተሉት ጥያቄዎች መልስ የሚሆነውን አንድ ሳጥን ብቻ ምልክት (✓) አድርግ/ጊ።

		እስማማለሁ 01	አልስማማም 02	አላውቅም 23
2.3	አንድ በኤች አይ ቪ የተያዘች እናት በኤች አይ ቪ የተያዘ ህፃን ልትወልድ ትችላለች			
2.4	አንድ ልጃገረድ የመጀመሪያውን የወር አበባ ከማየቲ በፊት ልታረግዝ ትችላለች			
2.5	አንድ ሰው ሳያውቀው በግብረ-ስጋ ግንኙነት በሚተላለፍ በሽታ ተጠቂ ሊሆን ይችላል			

ክፍል 3 ከቤተሰብ ጋር ያለ ቅርበት

ከዚህ በታች ከቤተሰብ ጋር ያለህን/ሽን ቅርበት የሚመለከቱ ጥያቄዎች አሉ። ስሜቱን በጣም ይገልፀዋል የምትለ/ይውን አንዱን ሳጥን ብቻ ምልክት (✓) አድርግ/ጊ።

		በጣም አልሰማማም	አልሰማማም	አልወግንም	እስማማለሁ	በጣም እስማማለሁ	አላውቅም	አይመለከተኝም
		1	2	3	4	5	6	7
3.1	ከእናቴ ጋር ቅርበት አለኝ ብዬ አስባለሁ							
3.2	እናቴ ትንክባክበኛለች							
3.3	እናቴ ትወደኛለች							
3.4	ከእናቴ ጋር ባለኝ ግንኙነት ደስተኛ ነኝ							
3.5	እናቴ እና እኔ እንቀራረባለን							
3.6	ከአባቴ ጋር ቅርበት አለኝ ብዬ አስባለሁ							
3.7	አባቴ ይንክባክበኛል							
3.8	አባቴ ይወደኛል							
3.9	ከአባቴ ጋር ባለኝ ግንኙነት ደስተኛ ነኝ							
3.10	አባቴ እና እኔ እንቀራረባለን							

ክፍል 4 ስለ ስነ ወሲብና ኤች አይ ቪ/ኤድስ ውይይት

4.1 ከዚህ በፊት ስለ ወሲብ ወይም ኤች አይ ቪ/ኤድስ ውይይት አድርገህ/ሽ ታውቃለህ/ታውቂያለሽ? /አንዱን መልስ ብቻ አክብብ/ቢ።
 አዎ ___ 01 የለም ___ 02 (መልሱ የለም ከሆነ ወደ 4.3 እለፍ/ፊ)

መልስ ሊሆኑ የሚችሉ አማራጮችን በሙሉ አክብብ/ቢ።

- 4.2 ከማን ጋር ተወያየህ?
 ከእናቴ ጋር ___ 01
 ከአባቴ ጋር ___ 02
 ከውንድም/እህቴ ጋር ___ 03
 ሌላ የቤተሰብ አባል ጋር ___ 04
 ከተመሳሳይ ያታ ጋደኛዬ ጋር ___ 05
 ከተቃራኒ ያታ ጋደኛዬ ጋር ___ 06
 ከወንድ/ሴት የፍቅር ጋደኛዬ ጋር ___ 07
 ከጤና ባለሙያ ጋር ___ 08
 ከመምህራ ጋር ___ 09
 ሌላ (ይጠቀስ) ___ 44

- 4.3 በአጠቃላይ ላንተ/ቺ በጣም ጠቃሚ የሆነው የኤች አይ ቪ/ኤድስ መረጃ ምንጭ የትኛው ነው? (የት ወይም ከማን ነው ስለኤች አይ ቪ ብዙ የተማርከ/ሽው?)
 ከመምህራ/የት/ቤት ኤች አይ ቪ ክለሶች ___ 01
 ከጋደኛዬ ___ 02
 መገናኛ ብዙሃን (ሬድዮ/ቴሌቪዥን፣ ጋዜጦች) ___ 03
 ቤተሰብ ___ 04
 የጤና ባለሙያ ___ 05
 መጽሀፍት/ፊልሞች ___ 06
 ሌላ (ይጠቀስ) ___ 44
 አላውቅም ___ 08

- 4.4 ስለ ስነ ወሲብ ወይም ኤች አይ ቪ/ኤድስ መረጃና ምክር ለማግኘት በማን ላይ እምነት ትጥላለህ/ትጥያለሽ?
- በእናት _____ 01
 - በአባት _____ 02
 - በወንድም/እህት _____ 03
 - በሌላ የቤተሰብ አባል _____ 04
 - በተመሳሳይ ሆስፒታል ጋራ _____ 05
 - በተቃራኒ ሆስፒታል ጋራ _____ 06
 - በመምህር/የት/ቤት ኤች አይ ቪ ክለሶች _____ 07
 - በጤና ባለሙያ _____ 08
 - በመጽሀፍት/ፊልሞች _____ 09
 - ሌላ (ይጠቀስ) _____ 44

ክፍል 5. ማህበራዊ ልማቶችና ጾታዊ ሚና

5ሀ. ማህበራዊ ልማቶች

ለሚከተሉት ጥያቄዎች አንዱን ምርጫ ብቻ አክብረ/ባ::

- 5.1 ወጣቶች ስለወሊድ መቆጣጠሪያዎች ማወቃቸው ከብዙ ሰዎች ጋር የግብረ-ስጋ ግንኙነት እንዲያደርጉ ያበረታታል::
- እስማማለሁ _____ 01
 - አልስማማም _____ 02
 - አላውቅም _____ 03
- 5.2 በአጠቃላይ ሁለተኛ ደረጃ (በመሰናዶ ት/ቤት) እያለህ/ሽ ልጅ መውለድ፣
- ምንም ችግር የለውም _____ 01
 - ችግር የለውም ምክንያቱም ቤተሰብ እርዳታ ያደርጋል _____ 02
 - ችግር አለው ግን ምንም አይደለም _____ 03
 - ለእናቱና ለልጅ ችግር አለው ለአባቱ ግን ችግር የለውም _____ 04
 - ለእናቱ፣ ለልጅና ለአባቱ ችግር አለው _____ 05

5ለ. የስነ ወሲብ እሴቶችና ምርጫዎች

ለሚከተሉት ጥያቄዎች መልስ የሚሆነውን አንድ ሳጥን ብቻ ምልክት (✓) አድርግ/ጊ::

		በጣም እስማማለሁ	እስማማለሁ	እርግጠኛ አይደለሁም	አልስማማም	በጣም አልስማማም
		5	4	3	2	1
5.3	በአፍላ ወጣትነት ጊዜ ወሲብ መፈፀም ለራሴ ከምስጢር ዋጋ/ግምት ጋር ይቃረናል?					
5.4	በአፍላ ወጣትነት ጊዜ ወሲብ ብፊፅም ጠቃሚ (ትልቅ) ሰው የሆንኩ ያህል ይሰማኛል::					

5ሐ. ሆስፒታል ሚና

- 5.5 የቤተሰቡን ወጭ ማን መቆጣጠር አለበት ብለህ/ሽ ታስባለህ/ታስቢያለሽ?
- አባት/ባል _____ 01
 - እናት/ሚስት _____ 02
 - ሁለቱም (ባልና ሚስት) በአንድ ላይ _____ 03
- 5.6 ለአንዲት ሴት እስከምታገባ ድረስ በድንግልና መጠበቁ ምን ያህል ጠቃሚ ነው ብለህ/ሽ ታስባለህ/ታስቢያለሽ?
- በጣም ጠቃሚ ነው _____ 01
 - ጠቃሚ ነው _____ 02
 - ምንም ጥቅም የለውም _____ 03

5.7 ለአንድ ወንድ እስከሚያገባ ድረስ በድንገልና መጠበቁ ምን ያህል ጠቃሚ ነው ብለህ/ሽ ታስባለህ/ታስቢያለሽ?
 በጣም ጠቃሚ ነው ___ 01 ጠቃሚ ነው ___ 02 ምንም ጥቅም የለውም ___ 03

ክፍል 6. የቤተሰብ ቁጥጥር ግንዛቤ

ለሚከተሉት ጥያቄዎች መልስ የሚሆነውን አንድ ሳፕን ብቻ ምልክት (✓) አድርግ/ጊ።

		በፍጹም	በጣም አልፎ አልፎ	ጥቂት ጊዜ	ብዙ ጊዜ	ከሞላ ጎደል ሁል ጊዜ
		01	02	03	04	05
6.1	ከትምህርት ቤትና ከቤት ርቀህ/ሽ ስትገኝ/ሽ የት እንደሆንክ/ሽ ወላጆችህ/ሽ ያውቃሉ?					
6.2	ከትምህርት ቤትና ከቤት ርቀህ/ሽ ስትገኝ/ሽ ከሚሂ ጋር እንደነበርክ/ሽ ቤተሰቦችህ/ሽ ያውቃሉ?					

ክፍል 7 የጊደኛ ተፅዕኖ እና የጊደኛ ባህሪ

ለሚከተሉት ጥያቄዎች መልስ የሚሆነውን አንዱን ምርጫ አክብብ/ቢ።

7.1 አንተ/ቺ የግብረ-ስጋ ግንኙነት እንድታደርግ/ጊ ከጊደኞችህ/ሽ ግፊት አለብህ/ሽ?
 ምንም ግፊት የለብኝም ___ 01
 ትንሽ ግፊት አለብኝ ___ 02
 መካከለኛ ግፊት አለብኝ ___ 03
 በጣም ከፍተኛ ግፊት አለብኝ ___ 04

7.2 ከጊደኞችህ/ሽ መሀከል ምን ያህሎቹ የግብረ-ስጋ ግንኙነት አድርገዋል?
 ማንም ___ 01
 ጥቂቶቹ ___ 02
 በከፊል ___ 03
 አብዛኛዎቹ ___ 04
 ሁሉም ___ 05

7.3 አሁን በጣም ስለሚቀርብህ/ሽ ጊደኛ አስብ/ቢ። ከአሁን በፊት የግብረ-ስጋ ግንኙነት አድርጎ/ጋ ያውቃል/ታውቃለች?
 የለም ___ 01 አዎ ___ 02 አላውቅም ___ 03

7.4 ከወንድ የቅርብ ጊደኞችህ/ሽ መሀከል ከሴተኛ አዳሪዎች ጋር የግብረ-ስጋ ግንኙነት ኖሮት የሚያውቅ ጊደኛ ታውቃለህ/ታውቂያለሽ?
 አዎ ___ 01 የለም ___ 02 አላውቅም ___ 03

ክፍል 8 የስነ ወሲብ ባህሪና ተግባራት

አንዳንድ ጊዜ ወጣቶች የግብረ-ስጋ ግንኙነት ያደርጋሉ። ይህም የሚሆነው በተለያዩ ምክንያቶች ሊሆን ይችላል፤ ለፍቅር፣ ለስሜት፣ ወይም አምነውበት፣ ተገድደው፣ ወይም ተታልለው።

ለሚከተሉት ጥያቄዎች መልስ የሆነውን አንዱን ብቻ አክብብ/ቢ።

8.1 ከዚህ በፊት የግብረ-ስጋ ግንኙነት አድርገህ/ሽ ታውቃለህ/ታውቂያለሽ?
 አዎ ___ 01 የለም ___ 02 [መልሱ የለም ከሆነ ወደ ክፍል 10 እለፍ/ፊ]

8.2 ለመጀመሪያ ጊዜ የግብረ-ስጋ ግንኙነት ስታደርግ/ጊ ዕድሜህ/ሽ ስንት ነበር?
 ___ ዓመት (በተሰጠው ክፍት ቦታ ቁጥሩን ጻፍ/ፊ) ___ 01
 ዕድሜዬን አላውቀውም ___ 02

- 8.13 የትኞቹን የመከላከያ ዘዴ/ዎች ነው የምትጠቀሙ/ሚው?
 ኮንደም ___ 01
 መታቀብ ___ 02
 አንድ ለአንድ ታማኝ መሆን ___ 03
 አላውቅም ___ 04
 ሌላ (ይጠቀስ) ___ 88
- 8.14 ከወሲብ ተጓዳኝነት/ሽ ጋር ምን ያህል ጊዜ ኮንደም ትጠቀማለህ/ትጠቀሚያለሽ?
 አልፎ አልፎ ___ 01 አብዛኛውን ጊዜ ___ 02
 ሁልጊዜ ___ 03 አላውቅም ___ 04
- 8.15 [ለወንዶች ብቻ] ከዚህ በፊት ከሴተኛ አዳሪ ጋር የግብረ-ስጋ ግንኙነት አድርገህ ታውቃለህ?
 አዎ ___ 01 የለም ___ 02 (መልስ የለም ከሆነ ወደ ክፍል 9 እለፍ)
- 8.16 መልሱ አዎ ከሆነ ምን ያህል ጊዜ ኮንደም ተጠቅመሃል?
 ምንም ___ 01
 አልፎ አልፎ ___ 02
 አብዛኛውን ጊዜ ___ 03
 ሁልጊዜ ___ 04
 አላውቅም ___ 05

ክፍል 9 ማስገደድ

ለሚከተሉት ጥያቄዎች መልስ የሆነውን አንዱን ብቻ አክብብ/ባ።

- 9.1 የመጀመሪያውን የግብረ-ስጋ ግንኙነት ያደረግክ/ሽው፤ በመስማማት፣ ወይም ምንም ሳይታሰብበት ነበር ወይስ በመታለል፣ በመፍራት ወይም በመገደድ ነበር?
 በፍላጎት ___ 01
 ተገድጄ ___ 02
 በገንዘብ ወይም በስጦታ በመስማማት ___ 03
 የአልኮል መጠጥ ወይም መድኃኒት ወስጄ ___ 04
 የፍርሃት ስሜት ስለነበረኝ ___ 05
 ሌላ (ይጠቀስ) ___ 99
- 9.2 [ለሴቶች ብቻ] በህይወትሽ እስከአሁን ድረስ ምን ያህል አስገድደው የደፈሩሽ ተጓዳኞች አሉ?
 ምንም ___ 01 ሁለት ___ 03
 አንድ ___ 02 ሶስት ወይም ከዚያ በላይ ___ 04
 አላስታውስም ___ 05
- 9.3 [ለሴቶች ብቻ] ከዚህ በፊት የግብረ-ስጋ ግንኙነት ለማድረግ ተብሎ የተቀበልሽው ነገር አለ?
 አዎ ___ 01
 የለም ___ 02 [ወደ ክፍል 10 እለፈ]
 አላስታውስም ___ 03 [ወደ ክፍል 10 እለፈ]
- 9.4 [ለሴቶች ብቻ] ምን ተቀበልሽ?

	አዎ	የለም
ገንዘብ	01	02
የት/ቤት ክፍያ	01	02
የቤት ኪራይ	01	02
ስጦታዎች (ይጠቀስ) _____		02
ሌላ (ይጠቀስ) _____		99

ክፍል 10 ስነ አእምሮአዊና ማሳበራዊ ሁኔታ

ከዚህ በታች ስላሉት ጥያቄዎች በሚገባ በማሰብ ምን ያህል አንተ/ችን እንደሚመለከትህ/ሽ አስብ/ቢ፣ የሚያሳሳቡህ/ሽ በጣም ፣ በትንሹ ወይም ምንም ሊሆን ይችላል። ከተሰጡት ምርጫዎች ያንተ/ችን ስሜት በሚገባ የሚገልፀውን ሳጥን ምልክት (✓) አድርግ/ጊ።

		ምንም 01	በትንሹ 02	በጣም 03	አላውቅም 04
10.1	የቤተሰብ እርዳታ አለመኖር				
10.2	የት/ቤትና ሌሎች ክፍያዎችን (የቤት ክራይን ጨምሮ) ማን እንደሚከፍልልህ/ሽ ማሰብ				
10.3	[ለሴቶች ብቻ] ያልተፈለገ እርግዝና ሊያጋጥመኝ ይችላል ብዬ ማሰብ				
10.4	በግብረ-ሰጋ ግንኙነት የሚተላለፉ በሽታዎች ኤች አይ ቪ ኤድስን ጨምሮ ይይዘኛል ብዬ ማሰብ				
10.5	ባል/ሚስት እንዳገባ የሚደረግብኝ ጫና				

ለሚከተሉት ጥያቄዎች መልስ የሆነውን አንድ ሳጥን ብቻ ምልክት (✓) አድርግ/ጊ።

10.6 በማህበራዊ ግንኙነት ያለ እርካታ

	በጣም እስማማለሁ 05	እስማማለሁ 04	መካከለኛ/ አልወግንም 03	አልስማማም 02	በጣም አልስማማም 01
በጊደኞቼ በጣም ደስተኛ ነኝ					
በቂ ጊደኞች የሉኝም					
ጊደኞቼ እኔ የምፈልገውን ያህል ጥሩ አይደሉም					
ጊደኞቼ የተሻሉ ቢሆኑ እመኛለሁ					
ብዙ ጊደኞች ቢኖሩኝ ደስ ይለኛል					

10.7 ለራስ የሚሰጥ ግምት

	በጣም እስማማለሁ 05	እስማማለሁ 04	መካከለኛ/ አልወግንም 03	አልስማማም 02	በጣም አልስማማም 01
ባጠቃላይ በራሴ ደስተኛ ነኝ					
ብዙ የምኮራበት ነገር እንደሌለኝ ይሰማኛል					
አንዳንዴ በፍፁም ጥሩ እንዳልሆንኩ (ዋጋ እንደሌለኝ) ይሰማኛል					
ብዙ ጥሩ የሆኑ ባህሪዎች እንዳሉኝ ይሰማኛል					
ለራሴ የተሻለ ግምት ቢኖረኝ ብዬ እመኛለሁ					

10.8 በአከባቢህ/ሽ በቅርበት የሚገኝና እኔ እንደሱ/ሷ በሆንኩ ብለህ/ሽ የምታስቡ/ቢው ግለሰብ ማን ነው/ናት?

- ቤተሰብ/አሳዳጊ _____ 01
- ሌላ አዋቂ ዘመድ _____ 02
- ወንድም/እህት _____ 03
- መምህር _____ 04
- የተመሳሳይ ጾታ ጊደኛ _____ 05
- የተቃራኒ ጾታ ጊደኛ _____ 06
- ታላቅ ጊደኛ _____ 07
- ሌላ (ይጠቀስ) _____ 08

ለሚከተሉት ጥያቄዎች ከተሰጡት ምርጫዎች አንዱን ሳጥን ምልክት (✓) አድርግ

10.19 እኔ የምጨነቀው.....

	በፍጹም አይደለም 01	በመጠኑ 02	በጣም 03
ስለምቅመው ጫትና ስለምወስደው መጠጥ ነው			
የወሲብ ጥቃት ይደርስብኛል ብዬ ነው			
ኤች አይ ቪ/ኤድስ ይይዘኛል ብዬ ነው			
ትልቅ ስሆን ስራ ስለማግኘቴ ነው			
ሌላ (ይጠቀስ)_____			

10.20 ከዚህ በታች የተጠቀሱትን ሃሳቦች/አማራጮች በማንበብ ላንተ/ቺ ወሳኝ (የሚያሳስበኝ) የምትለውን/የምትይውን ምረጥ/ጭ:: የሚያሳስቡህ/ሽን ነገሮች በቅደም ተከተል ዘረዘር/ሪ::

(ከ1 እስከ 10 ደረጃ ስጥ/ጩ)

- | | |
|------------------|-----------------|
| ትምህርት_____ | ስራ_____ |
| ገንዘብ_____ | ኃይማኖት_____ |
| ወንጀል_____ | አስገድዶ መድፈር_____ |
| መድሃኒቶች_____ | እርግዝና_____ |
| ኤች አይ ቪ/ኤድስ_____ | ሌላ (ይጠቀስ)_____ |

10.21 በጣም ተስፋ የሚያስቆርጥ ነገር ቢያጋጥምህ/ሽ [በምንም ምክንያት ሊሆን ይችላል]፣ የሚከተሉትን እርምጃዎች ለመውሰድ ታስባለህ/ታስቢያለሽ?

- ከሌላ ሰው እርዳታን መሻት/መፈለግ_____ 01
- ጉዳዩን ራሴ ይገጥሜ እንዲበርድ ማድረግ_____ 02
- ራሴን ማጥፋት_____ 03
- እንደሁኔታው/ችግሩ ዓይነት ይለያያል_____ 04
- ምንም ሃሳብ የለኝም/አይመለከተኝም_____ 05

በጣም እናመሰግናለን !

Annex-II

Discussion Guide for FGD of adolescents
A study on the effect of living arrangement and parental attachment on sexual risk behaviours and psychosocial problems in Dessie preparatory School, Ethiopia.

Name of moderator _____
Name of Rap-porter _____
Date _____ Total Time taken _____ minutes
Code no. of tape record _____
Living Arrangement _____

FGD discussants: Characteristics of the groups

Ser. No.	Age	Sex	Remark
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Discussion Points:

Section I. Living arrangement, parental attachment and adolescents' sexual risk behaviours

1. Do you think that living arrangement of adolescents have impact on their sexual risk behaviour? Why? And Why not?
2. Do you think that adolescents who came from rural areas are different from those living in the towns regarding sexual risk behaviour in any way? Why? And Why not?
3. How do you rate the effect of parental attachment and perceived parental monitoring on adolescents' sexual risk behavior? Explain Why?
4. Do you think that adolescents who came from rural areas differ in the level of sexual and reproductive knowledge they have from those living in Desssie? Why? How does this affect their behaviour?
5. Do you know specific social norms and gender roles that have impact on adolescents' sexual risk behavior?
6. Do social norms and gender roles among adolescents who came from rural differ in any way from those living in urban areas? How?

Section II. Psychosocial concerns in reference to parental attachment and living arrangement

1. Do you think that psychosocial problems are prevalent and/or issues of concern among adolescents? Why? and why not?
2. Which group of adolescents do you think are at a higher risk of having psychosocial problems?
 - With respect to living arrangement (ranging from adolescents living with both parents to those living alone)
 - Adolescents who came from rural areas versus those permanently residing in the town. Why?
3. Do you think that adolescents who came from rural areas and those living in the town with their families have equally secure attachment with parents? Why? And Why not?
4. How do you rate the effect of attachment to parents and parental monitoring on adolescents' psychosocial problems?

Annex-III

**Peer-to peer interview for students in Dessie preparatory school.
A study on the effect of living arrangement and parental attachment on sexual risk behaviors and psychosocial problems.**

Confidentiality and Consent

Dear respondent,

I am going to ask you some very personal questions that some people may find it difficult to answer. I am not going to talk to anyone about what you tell me. Your name will not be written on this form, and will never be used in connection with any information you tell me. You may end this talk at any time you want to. However, your honest answer to these questions will help us better understand sexual risk behaviours and psychosocial problems among adolescents in preparatory schools that would eventually help in designing appropriate intervention programs. The interview will take you 10-15 minutes. We would greatly appreciate your help in responding to the interview.

Would you be willing to participate in the study? **Agree** **Disagree**

Interview control Record

Name of Interviewer _____

Result of interview

- a. Completed
- b. Refused
- c. Partially completed

Time interview begun_____ -

Time interview ended_____ -

Supervisor's signature_____

1. Age _____ years.
2. Sex male 01 female 02
3. Living arrangement (relationship with parents)
4. Among your friends (peers) is there anyone who has a boy/girl friend?
 Yes 01 no 02
5. Among your friends (peers) is there anyone who has started sex?
 Yes 01 no 02
6. Do most of your friends (peers) started sex?
 Yes 01 no 02; Why? And why not? (**go to 9**)
7. At what age do most of your friends (peers) start sex?_____
8. Do you know a friend of yours who had sexual relationship with older partner (older than 25)?
 Yes 01 no 02
9. Do you know any friend of yours who formed relationship with someone of his age or less?
 Yes 01 no 02

10. Do you know a friend or someone of your age who has been raped?
 Yes 01 no 02. If yes, who raped her? , older men, boys of her own age, etc
11. Do you know a friend or someone of your age who ever had sex with a prostitute?
 Yes 01 no 02
12. Do you think someone of your age is at risk of HIV/AIDS?
 Yes 01 no 02
13. Do most adolescents of your age discuss about sexuality and HIV/AIDS among themselves?
 Yes 01 no 02
14. Do most adolescents of your age discuss about sexuality and HIV/AIDS with their families?
 Yes 01 no 02
15. Do you know a friend or someone of your age who has committed/attempted suicide?
 Yes 01 no 02
16. Is the friend you just told me living with his families?
 Yes 01 no 02

Thank you very much!