



**ADDIS ABABA UNIVERSITY**

**COLLEGE OF HEALTH SCIENCE**

**SCHOOL OF PUBLIC HEALTH**

**ASSESSMENT OF CONCURRENT MULTIPLE HEALTH RISK BEHAVIOURS  
AMONG YOUTH IN YABALLO TOWN, BORANA ZONE, OROMIYA REGION**

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**SCHOOL OF GRADUATE STUDIES**

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**Abbreviation and acronyms:**

<b>AIDS</b>	<b>Acquiring Immune Deficiency Syndrome</b>
<b>AOR</b>	<b>Adjusted Odd Ratio</b>
<b>ARH</b>	<b>Adolescent Reproductive Health</b>
<b>BSS</b>	<b>Behavioral Surveillance Survey</b>
<b>B.Sc</b>	<b>Bachelor of Science</b>
<b>COR</b>	<b>Crude odd ratio</b>
<b>DHS</b>	<b>Demographic and Health Survey</b>
<b>HHs</b>	<b>House Holds</b>
<b>HIV</b>	<b>Human Immunodeficiency Virus</b>
<b>HRBs</b>	<b>Health Risk Behaviors</b>
<b>ISY</b>	<b>In-School Youth</b>
<b>MPH</b>	<b>Master of Public Health</b>
<b>OSY</b>	<b>Out of School Youth</b>
<b>PPS</b>	<b>Proportionally to population size</b>
<b>PA</b>	<b>Peasant Association</b>
<b>REC</b>	<b>Research and Ethical Committee</b>
<b>SI</b>	<b>Sampling Interval</b>
<b>SRS</b>	<b>Simple Random Sampling</b>
<b>STDs</b>	<b>Sexual Transmitted Disease</b>
<b>STIs</b>	<b>Sexual Transmitted Infections</b>
<b>YSSPS</b>	<b>Yaballo Senior Secondary and Preparatory School</b>
<b>WHO</b>	<b>World Health Organization</b>

## Abstract

**Background:** Multiple health risk behaviors among adolescents pose a threat to their health, including HIV/AIDS. Health risk behaviors such as Khat, alcohol use, smoking, substance use, and sexual risk behaviors among youth have been shown to co-occur with each others.

**Objectives:** The aim of this study is to estimate the prevalence of single and concurrent health risk behaviors and to explore how health risk behavior is associated with socio demographic factors and peers' behaviors among youths in Yaballo town.

**Methodology:** A comparative cross-sectional study design was employed supplemented with qualitative study .The study subjects were systematically selected. Data were collected from 825 in in-school and out-of-school youths by using self-administered questionnaires.

The data were analyzed using univariate for frequencies, bivariate analysis to see the association between independent and dependent variable and multiple logistic regressions to control confounding variables.

**Results:** Out of total 65.2% were male and 34.7% female. Overall, out of the study participants 87 % (81.9% ISY, 92% OSY) youths ever had sex with an individual opposite sex. Disaggregated by sex, 66.6% of male had had sex compared to 33.4% of female. In logistic regression older age (AOR=2.82, 95%CI= 1.41, 5.65), school status (AOR=2.764, 95%CI=1.759, 4.345), Khat chewing (AOR=7.625, 95%CI=4.146, 14.022), Watching pornographic films (AOR=2.697, 95%CI=1.751, 4.153) and having sexually active peers (AOR=4.918, 95%CI=2.407, 10.046) were significantly and independently associated with ever having sex .Overall, 40.1% of out-of-of school youths had unprotected sex during the last sexual inter course prior to study compared to 37.1% of in-school youth. Of the 815 subjects, 10.9% reported no risks, 14.1% reported one risks, and 74.8% reported two or more risk behaviors. Among out-of-school youths having no education (AOR=4.445, 95%CI=1.450, 13.620) and grade level of 9-10 (AOR=3.170, 95%CI=1.517, 6.632) were strongly associated with two or more risk behaviors.

**Conclusion:** majority of youth were engaged in multiple health risk behaviors. The influencing factors are socio-demographic characteristics and peer influence. Interventions should focus to encourage adolescents to complete the compulsory primary education as well as help them to establish friendships and follow peers with good behavior.

## **Introduction**

The World Health Organization (WHO) defines adolescent people as those ages between 10 to 19 years old and young people as 10-24 and (1). Adolescence is the period of transition from childhood to adulthood during which young people experience changes following puberty (2).

## **Statement of the problem**

According to WHO estimates, one in every five people in the world is an adolescent, (between 10 and 19 years of age). With an estimated 1.2 billion adolescents alive today, the world has the largest adolescent population in history (3). Of these, about 85% live in developing countries. Moreover, more than half of the world's population is below the age of 25, and four out of five young people live in developing countries (4, 5). Many adolescents die prematurely every year, an estimated 1.7million young men and women between ages of 10 and19 lose their lives to accidents, violence, and pregnancy related complications and other illnesses that are either preventable or treatable. As a result, adolescent reproductive health (RH) is an increasingly important component of global health (3).

Youth, especially adolescents are in a state of rapid physical and psychological change. Because of their curiosity, enthusiasm and urge to experience new phenomena, a considerable number of youth experienced with or become addicted to alcohol, smoking, Khat, dangerous drugs and narcotics, all of which are detrimental to health. These and many similar health hazards challenge the youth's proper physical, mental and psychological development. As a result of such behaviors, the youth are being exposed to serious problems that include unsafe/unprotected sexual practice, early sexual debut, early marriage, unwanted pregnancy, unsafe abortion, and various venereal diseases and most importantly to HIV/AIDS pandemic (6).

Adolescents often engage in risky behavior such as smoking, drinking alcohol, using drugs, and early unprotected sexual activity (7). Risky behaviors might pose a threat to adolescent's future health. The adverse health consequences of these behaviors have been recognized as important public health issues(8). When adolescents take one risk, they also tend to take other risks (9-14). The interrelationship or cluster of health risk behaviors can be labeled as "risk behavior syndrome". This occurs in different combinations in different subpopulations (15-17).

The conceptual framework developed by Jessor (18) suggests that in the assessment of adolescent risk behavior, demographic-, socio-psychological- and environmental risk factors should also be considered. Concurrent predictors of health risk behaviors include the personality but also the biological factors, the family situation, and peer influence (19-22).

Substance abuse is generally believed to be one of the associated factors for sexual risk behavior in HIV transmission. Hard drugs like heroin and cocaine are very rarely available in Ethiopia. However, Khat, a locally produced psycho-stimulant is commonly and widely used in the country. Studies suggests that over 23% of out-of-school youth used Khat every day or once weekly while only 13% of in school youth did so. Only 0.7% of the in-school youth reported use of substances other than Khat, compared to 5.1% for out-of-school youth. Over 20% of out-of-school youth had unprotected sex during the 12-month period prior to the interview compared to 1.4% in-school youth (23).

### **Rationale of the study**

Sex and substance use could also co-occur because the initiation of one behavior causes (Either directly or indirectly) the initiation of the other. For example, intoxication may lower inhibitions leading to sexual intercourse that would not have otherwise occurred. Alternatively, one sexual partner may introduce the other to substances for the first time. Regardless of direction of the sequence, a causal association implies that, by addressing the first risk behavior in the sequence, we may reduce the odds of the second behavior occurring.

Therefore, knowing if and how risk behavior initiation is sequenced may help to inform concerned body for interventions.

Previous research almost exclusively focused on single risk factors while youths are displaying a concurrent multiple health risk behavior, which is poorly understood especially in low-income countries.

To enhance the contribution of the youth in the national development agenda, maintaining their well-being should be among the priority issues.

The aim of this study was to estimate the prevalence of single and concurrent health risk behaviors and to explore how health risk behavior is associated with socio-demographic factors and peers' behavior in order to get a better view of the constellation of multiple risk behavior factors among youth in Yaballo town.

## **Literature Review**

### **Substance use and risky sexual behaviors**

The World Health Organization (WHO) defines adolescent people as those ages between 10 to 19 years old (15). Adolescence is the period of transition from childhood to adulthood during which young people experience changes following puberty (1).

According to WHO estimates, one in every five people in the world is an adolescent, (between 10 and 19 years of age). With an estimated 1.2 billion adolescents alive today, the world has the largest adolescent population in history (2). Of these, about 85% live in developing countries. Moreover, more than half of the world's population is below the age of 25, and four out of five young people live in developing countries (4, 5). Many adolescents die prematurely every year, an estimated 1.7million young men and women between ages of 10 and19 lose their lives to accidents, violence, and pregnancy related complications and other illnesses that are either preventable or treatable. As a result, adolescent reproductive health (RH) is an increasingly important component of global health (3).

According to research conducted in united states youth risk behavior surveillance, Among high school students nationwide, 19.5% cigarette smoked, 34.2 % were currently sexually active, 38.9% of currently sexually active students had not used a condom during their last sexual intercourse, and 2.1% of students had ever injected an illegal drug(24).

According to study done in New York, has shown that peers, specifically peer sexual behavior and attitudes about such behavior, may influence sexual initiation among adolescents (25).

The results of out-of-school youth in China revealed that age, education level, family structure, parent's discipline, and attitudes towards premarital sex, parent-youth communication on sex related issues and dating were significantly associated with youth premarital sex. For male youth, older age, more relaxed parental discipline, higher level of sex-related knowledge, favorable attitudes, communicating with father regarding sex-related matters, and dating were associated with premarital sex. For female youth, higher education, single-parent family, favorable attitudes, communicating with mother regarding sex related issues and dating were significantly

associated with premarital sex. Youth's feeling towards their family and their family economic status was not associated with either male or female youth's premarital sexual initiation (26).

Results from study done in Taiwan found that education level, betel-nut chewing, alcohol intake, smoking behavior of peers, and the attitudes of parents and peers toward smoking are all associated with the risk of a young adult conscript becoming a habitual cigarette smoker(27).

As the case control study in Asia shows most sexually active adolescents (>70%) had viewed pornography, with the Internet (59%) being the main source, followed by videos (19%), mobile telephones (14%), and magazines (8.1%). Almost one half (43.6%) of the girls and approximately one third(29.5%) of the boys did not intend to have sex in the first place but engaged in sex subsequently because they could not control themselves, lacked the skills to say no, or were under the influence of alcohol or drugs(28).

According to the research done on rapidly developing country in boys and girls, respectively, prevalence (95% CI) was 30% (26–34)/21% (18–25) for smoking, 49% (45–54)/48% (43–52) for drinking, and 17% (15–20)/8% (6–10) for cannabis use. The prevalence of all these behaviors increased with age (29).

Study done in Uganda shows, overall 77.3% (79.7% of male, and 72.3% of female) adolescents used a condom at last sexual intercourse. Adolescents who drank alcohol and used drugs were 64% (OR=1.64, 95%CI 1.54, 1.75) and 68% (OR=1.68, 95%CI 1.56, 1.81) more likely to have used a condom, respectively. Meanwhile, adolescents who ever got drunk, and who reported to ever had 2 or more sex partners were 55% (OR=0.45, 95%CI 0.42, 0.48) and 35% (OR=0.65, 95%CI 0.62, 0.68) less likely to have used a condom compared to those who had never got drunk, and who ever had 1 sex partner, respectively. Adolescents who reported receiving no parental supervision were 45% (OR=0.55, 95%CI 0.53, 0.58) less likely to have used a condom compared to those who reported receiving parental supervision (30).

Study conducted in Cambodia among boys higher likelihood of risky sexual behavior remained significantly associated with higher levels of substance use, higher levels of peer delinquency, and higher family income. Among girls, higher likelihood of risky sexual behavior remained

significantly associated with higher levels of substance use , higher levels of community-violence witnessing, and lower levels of family support(31) .

Many youth who are out-of-school and unemployed spend much time on the streets, where they are vulnerable to experimentation with risky behaviors such as alcohol and drug abuse. Street kids, adolescents involved in sex work, and gay and bisexual males are particularly vulnerable and are often out of school. The abuse of drugs and alcohol is associated with an increase in unsafe sexual behavior and its consequences of sexually transmitted infections (STIs)/HIV and unintended pregnancies, as well as an increased risk of violence. In Tanzania, for example, youth ages 16 to 24 who smoked tobacco and drank alcohol were four times more likely than others to have multiple sexual partners. In Kenya, the single most important predictor of sexual activity for adolescent girls was using tobacco, alcohol, or drugs. Studies from numerous other countries confirm these findings (32).

### **Ethiopian context**

A study conducted in 2000, to evaluate the impact of a Community Based Adolescent Reproductive Health Program in Ethiopia showed that 56.7% of in-school males had never had sex. The median age at first sex for both males and females was 17 years. The proportion that reported at least 2 sexual partners last year was 25% males and 10.9% for females.

Having discussed HIV/AIDS with family members last year was 68.3% for in-school youth and 47.1% for out-of-school youth (33, 34).

The use of Khat and alcohol and other substances is significantly and independently associated with risky sexual behavior among Ethiopian youths. Over 1.4% of in-school Ethiopian youth had unprotected sex during the 12-month period prior to the interview. The Odds of unprotected sex were slightly higher among males compared to females. Daily Khat intake was also associated with unprotected sex. There was a significant and linear association between alcohol intake and unprotected sex with those using alcohol daily having a threefold increased odds compared to those not using it (23).

The national HIV AIDS behavioral surveillance survey also showed that 16% (19% of males and 13% of females) of the in-school youth had ever had sex. Among these the proportion was highest in the Oromiya region (31.3%) and lowest in Addis Ababa (6.5%). More than 25% of the In-school youth had sex by the time they were 15 years old. The two most common reasons for starting sex were personal desire (68%) and peer pressure (22%). Most male in school youth (49.3%) said that their first sexual partner had been close to their own age. In contrast, females reported that first sexual partners were often considerably older than they were. Accordingly, 35.4% reported that their first sexual partner had been 5-10 years older; moreover, 15% of all Females youth reported that their first sexual partner had been more than 10 years

In this study, Commercial partners were reported by 1.5% in school youth. Moreover, non commercial partners were reported by 52.9% of in school youth (44.9% of males and 64.8% of females) who had sex during the previous 12 months. The percentage of in-school youth reported more than one sexual partner in the previous 12 months was (16.9%). During their last sexual encounter with noncommercial partners, 52.4% of in school youth (64.2% of males and 40.2% of females) had used a condom and 73.6% (79.2% of males and 64.4% of females) had used condoms consistently during the previous 12 months. More male than female youths was reported using condom with their last sexual partner (63.3% of males VS 45.5% of females). The commonest reasons for non uses of condoms amongst the youth were partner trust (54.4%) and partner objection (9.4%).

In the four weeks preceding interview, 9% of ISY and 29.1% of OSY (22.9% of the younger and 35.6% of the older) had consumed drinks containing alcohol. Regular consumption of alcohol (consumption at least once a week) was reported by 19.5% of the younger OSY (24% of males and 15% of females) and 32.7% of the older OSY (42.8% of males and 22.5% of females). Amongst ISY, 8.9% (10% of males and 7.8% of females) were regular alcohol users. For the OSY, the highest percentages of regular alcohol users were found in the Amhara (48.1%) and Tigray (37.2%) regions and lowest percentages in the Somali (11.8%) and Afar (12.3%) regions. Amongst ISY the highest and lowest percentages of regular alcohol users were found in the Amhara (19.5%) and Addis Ababa (2.4%) regions, respectively.

Overall, 9.7% of ISY (16.4% of males and 3% of females) and 28.5% of OSY (42.2% of males and 14.9% of females) had ever used drugs. Amongst OSY, 'ever drug use' was highest in the Somali (48.4%) and Harari (45.1%) and lowest in the Tigray (12.3%) and Amhara (13.2%) regions. For ISY, 'ever drug use' was highest in the Harari region (21.2%) and lowest in the Addis Ababa region (3.1%). Amongst the 'ever khat users' 82.9% was male and 81.3% was female younger OSY used Khat regularly. For the older OSY, 88.6% of males and 84.2% of females reported regular use of Khat. Amongst ISY, 78.9% of male sand 60.9% of females used Khat regularly. The proportion of OSY and ISY who had ever had sex was 49 and 16%, respectively. Amongst the younger OSY, 35% of males and 29% of females had ever had sex; in the older OSY, 74% of males and 60%of females had ever had sex. In contrast, amongst the ISY only 19% of males and 13% of females had ever had sex.(35).

Study conducted on single youth Ethiopia revealed that, only 25% of male youth and 16% of female youth ever had sexual intercourse. Comparison of the mean age at first sexual intercourse showed that female youth are sexually initiated at earlier age (15.7years) than male youth (16.5years). Only 22.7% of male youth and 10.4% of female youth with a history of ever having sexual intercourse used condom during the last sexual act, 76.3% of male youth and 68.7% of the female youth were aware of some form of family planning methods. The proportion of youth ever having sexual intercourse who are currently using any method was 12.3% for males and 9.3% for females. Among single Ethiopian youth the overall sexual activity is relatively lower than reported from other African countries but high risk sexual behavior is common. Socio-demographic factors influence youth sexual behavior (36).

Study done using *Jessor's theoretical framework* most students (64 percent male and 89 percent female) were not sexually active. Only 56 percent of the sexually active youths reported ever using condoms. Family involvement, age of boy/girlfriend, expectations for academic achievement, and substance abuse were associated with at least three of the six sexual behaviors or intentions examined. Risk and protective factors in the personality, perceived environment, and behavior domains were associated with at least one sexual behavior or intention (37).

Study done in Addis Ababa reveal that five important reasons attributable to the early initiation of sex among female adolescents, including 'Desire to maintain relationship with male partner' (50.8%), 'being carried away by passion' (45.8%), 'to overcome loneliness' (39.9%), 'physical attraction to the person' (38.9%), and 'peer influences' (33.6%).

In addition, alcohol and Khat uses were mentioned as factors contributing to early initiation of sex (by 31.2% and 29.1% of the respondents, respectively). More importantly, 'rape' was indicated by 30.6% of the respondents to be an important factor predisposing them for an early initiation of sexual intercourse. Regarding the Bivariate associations, the observed correlation among the various 'problem behaviors' (e.g., alcohol and Khat use) were significantly bigger than the rest of the figures. Besides, 'rape' s a reason is significantly associated with 'alcohol use' ( $r=0.47$ ,  $p<.01$ ), 'Khat use' ( $r=0.56$ ,  $p<.01$ ), and 'peer influences' ( $r=0.48$ ,  $p<.01$ )(38).

A study done in Nekemte showed that 21.4% of high school students engaged in premarital sexual Relation; Sex, living arrangement, and Chat chewing are significantly associated with premarital sexual initiation. The median age of first sexual intercourse was 16.4 years (39).

In Northwest Ethiopia, the sero-prevalence of HIV infection among high school students was 1.9%. Over 21% of the students were sexually active, and the mean age of first sexual contact was 16.6 years. Sexual contact with a commercial sex worker or non-regular partner was reported by 16.5%. Only 33.2% of those who were sexually active used condoms; and 39.2% of these used a condom only sometimes. (40).

HIV/AIDS BSS of Ethiopia 2005 shows that of those that had ever had sex, 40.6% had had sex at or before the age of 15. Amongst those who had ever had sex, more males than females (44.5% vs. 30%) were sexually active at or before the age of 15. The median age of sexual debut (first sex) among those who were sexually active was 16 years for both sexes. The commonest reasons for starting sex were personal desire (67.1%) and peer pressure (19.3%). A considerable proportion of females (15.3%) reported that they were forced into first sex.

Respondents who reported ever having had sex were asked if they had had sex during the past 12 months. 61.3% had had sex during the previous 12 months, and the proportion of females was higher than that of males (64.7% vs. 60.1%). Within this group, commercial sex was reported by

4.2% and noncommercial sex by 94.9%. While more in school youths males than females (5.4% vs. 1.4%) were engaged in sex with commercial partners, sex with non commercial partners was more common among females (96% vs. 94.5%). Among those who had had sex during the previous 12 months, 22.7% (31.2% of males and 2.7% of females) reported having had sex with more than one partner. Males were 12 times more likely to have had more than one sexual partner than females (95% CI 5.6, 24.7) (41).

A study done in Dessie indicated that a substantial proportion of adolescents in preparatory Schools were sexually active. Parent-teen connectedness, parental monitoring and living Arrangements were significant predictors of sexual activity. A greater sense of connectedness to and monitoring by parents decreased 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 were more likely to use condom consistently(42).

A study done among Agaro high school students showed that 90 (25%) of the sexually active students had sexual history. the mean age of coitus was 16.74 (16.45% and 16.8%) for males and females respectively .this study also showed that fifty (55.6%) of the sexually active students had one partner, 32 (35.6%) had 2-5 and the remaining had more than 5 sexual partners during the past 12 months. among these, 28 (40%) males and 5 (7.1%) females reported to have 2-5 and more than 5 partners respectively. in this study the majority 40(44.4%) reported that they had multiple partners, of these majority 33 (47.1%) were males. the study revealed that (54.4%) of the sexually actives used condoms at least once. of these, 46.9% of them used condoms always and 38.8% occasionally (43).

According to the research conducted in Bale zone ,about 31% of the adolescent they had practiced sexual intercourse, the mean age at first sexual intercourse was 15.87(SD+-1.8) years. The reasons cited for the initiation of first sexual intercourse were personal desire(39.1%),peer pressure(23.3%),influence of alcohol(13.6%),Khat chewing(12.4%), 47.7% of them had more than one partners in the past(44).

Finding from north east Ethiopia indicates, Socio-demographic characteristics, particularly gender, place of residence and age, were significantly related with early sexual debut and showed that youth who chew Khat were two times more likely to initiate sexual intercourse before 18 years of age. Those who drink alcohol also were two times more likely to initiate sexual intercourse before the age of 18(45).

According to DHS 2005 the overall prevalence of sex when the respondent or partner is drunk is quite low, especially for young women (3 percent for women and 2 percent for men). Percentage of young women and men age 15-24 who had sexual intercourse in the past 12 months while being drunk among young women age 15-19 who had sexual intercourse 2.9 and for young men 1.1%, for female 19-24 was 3.3% and for male 20-24 were 2.3% respectively(46).

A study done in Asendabo town reveals that of the youth who were sexually active, 57.4% reported Khat use and 77.4% reported using alcohol. Khat chewers were as twice likely as non-chewers to have multiple sexual partner and alcohol drinkers were also prone to practice multiple sexual partnerships as compared to non-drinkers. Two hundred twelve (34%) reported to have chewed Khat in their lifetime, out of which 18 (8.5%) male and 8 (3.8%) female youths tried chewing Khat before the age of 15 years. Higher proportion of males (26.7%) chewed Khat more frequently than their female (6.7%) counterparts during their recent sexual practice. Condom use during the recent sexual intercourse have no statistically significant difference between the two sexes ( $p=0.05$ ). However, the overall proportion of condom non-users was very high. This study found that males and ever married ( $p=0.02$ ) were two to three times more likely to have multiple sexual partners as compared to females and single counterparts, respectively. Khat chewers were twice more likely to have multiple sexual partners(47).

## **OBJECTIVE**

### **GENERAL OBJECTIVE**

Assessment of concurrent multiple health risk behaviors among youth in Yaballo town, Borana Zone 2011/12

### **SPECIFIC OBJECTIVE**

- To estimate the prevalence of single and concurrent health risk behaviors among youths in Yaballo town.
- To compare health risks behaviors among youth in-school and out-of-school
- To identify factors associated with ever having sex of youths in Yaballo town.
- To explore how health risks behavior is associated with socio demographic factors and peers' behaviors.

## **MATERIALS AND METHODS**

### **Study design**

A comparative cross-sectional study design supplemented with qualitative study was undertaken to assess the prevalence of concurrent multiple health risk behaviors among youth in Yaballo town.

### **Study area**

The study was conducted in Yaballo town, which is the Borana zone capital. Yaballo woreda is one of the Borana Zone districts among 13 districts, it has 23 kebeles / Peasant Association where above 75 % of the PA's life style is pastoral and the remaining agro pastoral. Concerning the health coverage's, except three PA's of the woreda all the remaining have functional health facilities with full equipment and staff (6 health centers and 11 Health Posts). The estimated population of the town is 17,947(9,398 male and 8, 099 female) .The estimated number of youth from 15-24 age is 5,064(2,872male and 2,192female) .The town was located 573KM from Addis Ababa .The town has two kebele. Kebele one has 5,236 population (2,659 male and 2,577 female) with 1,277 HHs and kebele two has 12,261 population (6,739 male and 5,523 female) with 3,149 HHs(48). There are one secondary and one preparatory school in the town. During the 2011/12 academic year there were 1,925 students from grades 9-10<sup>th</sup> and preparatory school 764 students who had been enrolled. The total number of students who were enrolled for the academic year 2011/12 was 2,689.

Addiction and predisposition to STDs and HIV/AIDS are among the major health risk of the pastoral youths.

### **Source population**

The source populations for the study were all youths between the ages 15-24 years in Yaballo town and all students enrolled in Yaballo high school in 2011/12 academic year.

### **Study population**

The study populations were students of grade 9-12 in Yaballo high school and out of school youth in the age bracket 15-24 residing in Yaballo town.

**The inclusion criteria** for the enrolment of eligible respondents were youths aged 15 to 24 years who reside in Yaballo town for at least 6 months prior to the date of the survey.

**The exclusion criteria** all married youths for both, those unable to hear and talk and unable to read and write for out-of-school youths.

**Sample size**

The sample size was calculated using two population proportion formula with the following assumption; Taking the prevalence rate of Khat chewing which was found to be 23% (P2), for out -of-school youth and 13 %( P1) for in-school youth (23).

$$n = \frac{\left[ z_{\alpha/2} \sqrt{(1+1/r)p(1-p)} + z_{\beta} \sqrt{p_1(1-p_1) + \frac{p_2(1-p_2)}{r}} \right]^2}{(p_2 - p_1)^2}$$

Where;

**Z α/2** = The Z - score corresponding to the probability with which it is desired to be able to Conclude that an observed difference of size **(P1-P2)** of variable between in school and out of school youths would not occur by chance alpha 0.05=1.96.

**Z 1- β** = The Z- score corresponding to the degree of confidence with which it is desired to be Certain of detecting a difference of size **(P1 -P2)** between variables if that actually present 80% = 0.84

Where n<sub>1</sub>=in school youth n<sub>2</sub>= out-of –school youth

r= n<sub>2</sub> / n<sub>1</sub> = 1:1

P (population proportion) = **P1+ rP2/ 1+r**

The sample size was calculated by using EPI INFO computer Soft ware version 3.5.1 and the overall sample size was 825 (n<sub>1</sub>= 413) and n<sub>2</sub>= 412) by considering the design effect of 1.5 and non response rate of 10%.

**Sampling procedure**

The following criteria were used in selection of the study subjects:

(1) **In-school youth:** aged 15–24 years, daytime high school students attending grades 9–12

(2) **Out-of-school youth:** aged 15–24 years, not attending day or night school, unemployed or unskilled laborer.

A multi-stage sampling was applied for in-school youths. Initially students were stratified by grade and form each grade section. Fifty percent of section was selected by lottery method. The number of students per section was determined by proportionally to population size. The study unit was selected by systematic sampling method. To select the study unit student's roster was used as frame.

Out-of-school youths (OSY) were selected from two kebeles found in town. Households of the selected kebeles were systematically selected. The sample sizes were distributed to each Kebele proportional to the population size of the kebeles. The households in each of the kebeles were obtained from the Kebele offices and samples that are required from each Kebele were determined proportionally. Hence, the sampling interval was found to be every 4<sup>th</sup> house .Then, the households were identified systematically and target youths were selected by lottery system if more than one youth was found in a house hold. When the identified respondent was not available on the day of visit to a household, appointment was made to return for the interview. The data collectors were advised to go to the households at times when the youths would likely be at home such as early in the morning. When it was not possible to trace the identified individual after two attempts, the next household was taken as a substitute.

### **Data collection methods**

Structured and semi-structured, pretested and self-administered questionnaires were used for data collection. Data collectors were those who have B.Sc and supervisor who know the local language and culture was recruited for questionnaire administration and supervision. Adequate training was given for both data collectors and supervisors, both before and after pretest, on the objective of the study, the contents of the questionnaire, issues related to the confidentiality of the responses and the rights of respondents. The trainees were given responsibility to handle the whole process of data collection and to check and correct question raised by the respondents. The overall data collection process was coordinated and supervised by supervisors and principal investigator.

## **Qualitative part of the study**

### **Focus Group Discussions**

Focus group discussions were conducted after the collection of quantitative data in order to generate more information about the concurrent multiple health risk behaviors among youth.

### **Sample size, Data collection methods and tools for qualitative**

A series of 4 focus group discussions were carried out among purposively selected youth from youth association, Anti AIDS club, teachers and woman association to explain some of the findings from questionnaire interview. Discussions were gender segregated. The number of participants in each group ranged from 6-10 individuals. A semi-structured/open-ended guideline 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 were focused on why youths exposed to multiple health risk behaviors.

### **Operational definition**

**Out-of-school youth:** aged 15–24 years, not attending day or night school, unemployed or unskilled laborer during data collection.

**In-school youth:** youth within the age range of 15-24 years who were engage in education.

**Health risk behaviors:** when youth practices risk behaviors such as substance use and sexual activity.

**Single risk behaviors:** when youth practice one of the six risk behaviors such as Khat, alcohol, cigarette smoke, sexually active, having sex before 15 years, etc.

**Concurrent risk behaviors:** when youth engaged the coexistence of the single risk behaviors.

**Unsafe sex:** sexual intercourse without use of condom

### **Variables**

#### **Independent variable**

The independent variables are age, sex, school status (in or out of school), educational attainment, source of income, living arrangement, substance use (Khat, alcohol, cigarette, drug).

### **Dependent variable**

- Unprotected sex
- Sexual experience
- Health risk behaviors

### **Data analysis for Quantitative**

Data were entered and cleaned by PI using Epi Data 3.1 and analyzed using SPSS 16 version. Descriptive analyses were carried out to explore the socio-demographic characteristics of the respondents. Chi-square analyses were performed to determine the association between the socio-demographic background and peer's health risk behaviors and the sexual behavior of youths and two categories of multiple HRBs ( one risk and two or more health risk behaviors). Bivariate analyses were performed. SPSS was used to perform logistic regression analysis to control the confounding variable. Odd ratio (crude and adjusted),  $\chi^2$  and 95% Confidence level were utilized to show strength of the association and statistically significant.

### **Data analysis for Qualitative**

The qualitative data was analyzed after the analysis of quantitative data. The qualitative data analysis was with reviewing the responses and the notes taken with FGD facilitators and audio tape responses. All focus group discussion were taped, transcribed and coded with open code 3.6. Analysis of the qualitative data was accomplished based on the determined themes and adding the context of additional information provided by the respondents.

### **Data quality management**

The questionnaire was prepared originally in English and then translated to Afan Oromo language and then back to English. Pretest of the questionnaire for clarity and consistency of the questions were done three day prior to the actual data collection.

Then necessary correction was made based on the feedback of the data collectors. The qualities of data were ensured through proper training of data collectors and pre testing of the questionnaire and close supervision of data collectors. All collected data were checked for completeness, accuracy and consistency by the principal investigator every day. And anything which is unclear was corrected and communicated to the data collectors on the next day. Five to ten percent of data was double entered and compared with the already entered data.

### **Ethical consideration**

The study protocol was approved by the School of Public Health and then by the REC of the College of Health Science, Addis Ababa University. An official letter of co-operation was written to the concerned body of Oromiya Region, zonal educational bureau, youth and sports of Yaballo town and municipality. Information on the studies was given to the participants, including purpose and procedures, potential risk and benefits so encourage provision of accurate and honest responses. Potential participants were told that participation was voluntary and that confidential and private information would be protected. Interviews were carried out in privacy and the respondents were assured anonymity and confidentiality. Verbal consent of the parents was obtained for adolescents less than 18 years, whereby parents were notified that their child was invited to participate in an anonymous survey.

### **Dissemination of finding**

The findings of this study will be disseminated to School of Public Health as partial fulfillment of the MPH degree. Besides it will be disseminated to the Ministry of youth and sport, Ministry of health, Oromiya health, education and youth and sport bureau, Borana zone health, education and youth and sport bureau, Yaballo municipality, education bureau and youth and sport office. The findings will also be disseminated to different organizations that will have a contribution to promote health and prevent diseases related to youth health risk behaviors in the region and zone. The findings will also be presented in various seminars and workshops. It may also be published in a scientific journal.

## **Result**

### **Socio-demographic characteristics**

The final sample included 815 both in-school and out-of-school youth with complete data out of 825 youths who participated in the study. Ten questionnaires were discarded due to incompleteness. This has made the response rate of 98.7%.

Out of the total 815 respondents' 70.1% (89.8% ISY, 50.9% OSY) were in the age range of 15-19 years. The mean age of in-school youth was 17.4 years (SD=2.2) and that of out-of-school was 19.4 years (SD=2.2).

Overall, 34.2% (34.2% ISY, 34.2% OSY) fathers and 46.5% (37.7% ISY, 55.1% OSY) mothers of respondents were illiterate.

Concerning the living arrangement of respondent in general, the majority were living with both biological parents 59% (49.1% ISY, 68.7% OSY), followed by alone 16.4% (20.4% ISY, 12.6% OSY). The main source of income was from parents 60.6% (70.3% ISY, 51.2% OSY), followed by earning money by working 30.7% (18.6% ISY, 42.5% OSY).

The majority of youths were ethnically Oromo 82.2% (87.8% ISY, 76.7% OSY), followed by Burji 6.7% (5% ISY, 8.5% OSY), Amhara 3.8% (2.7% ISY, 4.9% OSY) and most of the youths were followers of orthodox Christianity 29.9% (27.3% ISY, 32.5% OSY), followed by protestant 28.3% (24.8% ISY, 31.8% OSY)

**Table 1 Socio-demographic characteristic of youths aged 15-24 years by school status  
Yaballo Town, Borana Zone, Oromiya, 2012**

Variable	In-school	Out-of-school	Total
<b>Age</b>			
15-19	362 (89.8)	209 (50.7)	571 (70.1)
20-24	441 (10.2)	203 (49.3)	244 (29.9)
Mean <sup>a</sup> ±SD	17.48 ±1.52	19.4±2.2	18.45±2.13
<b>Sex</b>			
Male	257 (63.8)	275 (66.7)	532 (65.2)
Female	146 (36.2)	137 (33.3)	283 (34.7)
<b>Ethnicity</b>			
Oromo	354 (87.8)	316 (76.7)	670 (82.2)
Gurage	4 (1)	20 (4.9)	24 (2.9)
Amhara	11 (2.7)	20 (4.9)	31 (3.8)
Tigre	2 (0.5)	7 (1.7)	9 (1.1)
Konso	4 (1)	11 (2.7)	15 (1.8)
Burji	20 (5)	35 (8.5)	55 (6.7)
Others	8 (2)	3 (0.7)	11 (1.3)
<b>Reigion</b>			
Orthodox	110 (27.3)	134 (32.5)	244 (29.9)
Musilim	25 (6.2)	32 (7.8)	57 (7)
Protestant	100 (24.8)	131 (31.8)	231 (28.3)
Catholic	103 (25.6)	49 (11.9)	152 (18.7)
Wakefata	63 (15.6)	65 (15.8)	128 (15.8)
Others	2 (0.24)	1 (0.24)	3 (0.36)
<b>Level of education</b>			
Illiterate	NA	10 (2.4)	10 (1.2)
Read and write	-	5 (1.2)	5 (0.6)
Grade 1-4	-	34 (8.7)	34 (4.4)
Grade 5-8	-	80 (19.4)	80 (9.8)
Grade 9-10	264 (65.5)	181 (43.9)	445 (54.6)
Grade 11-12	139 (34.5)	41 (10)	180 (22.0)
Above grade 12		59 (14.3)	59 (7.2)
<b>Father level of education</b>			
Illiterate	138 (34.2)	202 (34.2)	340 (41.7)
Read and write	33 (8.2)	17 (4.1)	50 (6.1)
Grade 1-4	38 (9.4)	58 (14.1)	96 (11.8)
Grade 5-8	79 (19.6)	61 (14.8)	140 (17.2)
Grade 9-10	61 (15.1)	59 (14.3)	120 (14.7)
Grade 11-12	15 (3.7)	8 (1.9)	23 (2.8)
Above grade 12	39 (9.7)	7 (1.7)	46 (5.6)
<b>Mother level of education</b>			
Illiterate	152 (37.7)	227 (55.1)	379 (46.5)
Read and write	46 (11.4)	14 (3.4)	60 (7.4)
Grade 1-4	54 (13.4)	54 (13.1)	108 (13.3)
Grade 5-8	56 (13.9)	70 (17)	126 (15.5)
Grade 9-10	35 (8.7)	31 (7.5)	66 (8.1)
Grade 11-12	18 (4.5)	8 (1.9)	26 (3.2)
Above grade 12	42 (10.4)	8 (1.9)	50 (6.1)

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<b>Living arrangements</b>			
Both parents	198 (49.1)	283 (68.7)	481 (59)
Mother only	6 (1.5)	4 (1)	10 (1.2)
Father only	19 (4.7)	14 (3.4)	33 (4)
Brothers/sisters	33 (8.2)	17 (4.1)	50 (6.1)
Cousin	6 (1.5)	4 (1)	10 (1.2)
Grand parents	5 (1.2)	1 (0.2)	6 (0.7)
Step father/mother	1 (0.2)	2 (0.5)	3 (0.4)
My friends	50 (12.4)	34 (8.3)	84 (10.3)
Alone	82 (20.3)	52 (12.6)	134 (16.4)
Others	3(0.7)	1(0.2)	4 (0.2)
<b>Source of income</b>			
Parents	283 (70.3)	211 (51.2)	494 (60.6)
Working	75 (18.6)	175 (42.5)	250 (30.7)
Relatives	13 (3.2)	6 (1.5)	19 (2.3)
Scholarship	32 (7.9)	20 (4.9)	52 (6.4)

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**NA=Not applicable**

### **Sexual behavior of youth**

Overall, 87% (81.9% ISY, 92% OSY) youth reported having had sexual intercourse. Out of those who ever had sex 64.6% (57.9% ISY, 70.4% OSY) reported that their first sexual partner was a boy/girl friend, 19.9% (24.5% ISY, 15.8% OSY) a stranger, 8% (7% ISY, 9% OSY) a family member, 3.1% (5.2% ISY, 1.3% OSY) a husband/wife, 2.7% (3.3% ISY, 2.1% OSY) a teacher, and 1.7% (2.1% ISY, 1.3% OSY) other. More boys 472 (66.6%) than girls 237 (33.4%) and out-of-school 379 (92%) than-in school 330 (81.9%) youth have reported having had sex (OR=1.52, 95%CI=1.01, 2.31 and OR=2.54, 95%CI=1.64, 3.93 respectively).

Age at first sexual intercourse was varied and inconsistent, with the highest percentage having had sex between the ages of 15-18 years. Of those who ever had sex, 16% (18.8% ISY, 13.4% OSY) had had sex before the age of 15 years, 74.4% (66.7% ISY, 81.7% OSY) were sexually active between 15-18 years and 2.8 % (0.9% ISY, 4.4% OSY) were sexually active between 19-24 years. More in-school 62 (18.8%) youths than out- of-school 51 (13.4%) youths was sexually active before 15 years.

Amongst those who ever practiced sex, 35.8 % (39.1% ISY, 33% OSY) had used substance during the first sex. Out of those had ever sex, 35.8% (24.6% ISY, 45.4% OSY), 44.4% (51.5% ISY, 38.5% OSY), and 7.9% (6.4% ISY, 9% OSY) reported having had one, two to four and five or more sexual partners in their life time respectively. Amongst the sexually active youths, 75.6 % (72.1% ISY, 78.6% OSY) had sexual intercourse at least once during the last six months prior to the survey.

**Table 2 percentage distributions of sexual behaviors of in-school and out-of-school youths in Yaballo Town, Borana Zone, Oromiya, 2012.**

<b>Variable</b>	<b>In school(403)</b>	<b>Out of school (412)</b>	<b>Total (both)</b>
<b>Every practice sex</b>			
Yes	330 (81.9)	379 (92)	709 (87)
No	73 (18.1)	33 (8)	106 (13)
<b>Age at first sex</b>			
< 15	62 (18.8)	51 (13.4)	113 (16)
15-18	220 (66.7)	308 (81.2)	528 (74.4)
19-24	3 (0.9)	17 (4.4)	20 (2.8)
Don't know	45 (13.6)	3 (0.8)	48 (7)
<b>Age of partner</b>			
older than 10 yrs	5 (1.5)	11 (2.9)	16 (2.2)
Older than 5 yrs	104 (31.5)	122 (32.1)	226 (31.8)
Younger than me	72 (21.8)	103 (27.1)	175 (24.6)
Equal with me	70 (21.2)	61 (16.0)	131 (18.4)
Don't know	79 (23.9)	82 (21.6)	161 (22.7)
<b>sexual partner</b>			
husband/wife	17 (5.2)	5 (1.3)	22 (3.1)
boy/girl friend	191 (57.9)	267 (70.4)	458 (64.6)
family member	23 (7.0)	34 (9.0)	57 (8)
teacher	11 (3.3)	8 (2.1)	19 (2.7)
stranger	81 (24.5)	60 (15.8)	141 (19.9)
other	7 (2.1)	5 (1.3)	12 (1.7)
<b>Consumption of substance use</b>			
yes	129 (39.1)	125 (33)	254 (35.8)
No	171 (51.8)	240 (63.5)	411 (58)
Don't know	17 (5.2)	14 (3.7)	31 (4.4)
No response	13 (3.9)	0(0)	13 (1.8)
<b>Number of life time sexual partner</b>			
1	82 (24.6)	172 (45.4)	254 (35.8)
2-4	170 (51.5)	145 (38.3)	315 (44.4)
>5	22 (6.7)	34 (9.0)	56 (7.9)
Don't know	56 (17.0)	28 (7.4)	84 (11.8)
<b>Sexual activity in last 6 months</b>			
yes	238 (72.1)	298 (78.6)	536 (75.6)
No	83 (25.2)	80 (21.1)	163 (23)
Don't know	5 (1.5)	1 (0.3)	6 (0.8)
No response	4 (1.2)	0	4 (0.6)
<b>Number of partner in last six months</b>			
1	188 (79)	218 (73.2)	406 (74.6)
≥2	49 (20.6)	80 (26.8)	129 (24.1)
Don't know	1(0.4)	0	2 (0.2)

### **Factors associated with sexually experienced of youths**

In the Bivariate analysis results revealed that among the socio-demographic variable age, school status, religion, living arrangements, youth education , fathers education and source of income were strongly associated with engagement in sexual activities.

School status of youth is statistically associated with ever having sex at( $X^2=18.38$ ,  $P=0.00$ ). Significantly higher proportion of sexually active out -of- school than in school youths (68.9% vs. 46.5%) were involved in having sex.

Sex of youths were statistically associated with ever having sex ( $X^2=4.043$ ,  $P=0.04$ ).

Age of the youth shows statistically significant associated with ever having sex at( $X^2=22.23$ ,  $P=0.00$ ).

Father education of youth shows statistically significant with ever having sex( $X^2=16.57$ ,  $P=0.01$ )

Living arrangements of youths statistically associated with ever having sex( $X^2=33.22$ ,  $P=0.00$ ).

Source income of youth statistically significant with ever having sex( $X^2=18.94$ ,  $P=0.00$ )

Youth education were statistically associated with ever having sex ( $X^2=12.93$ ,  $P=0.04$ )

**Table3. Bivariate analysis of socio-demographic characteristics and sexual activity among youths in Yaballo Town, Borana Zone, Oromiya, 2012**

Characteristics	Ever had sexual Intercourse (%)		COR 95%CI	(X <sup>2</sup> ) chi square, P-value
	Yes	No		
<b>Age</b>				22.23
15-19	476 (83.9)	95 (16.6)	1	0.000
20-24	233 (95.5)	11 (4.5)	4.22 (2.22, 8.05)*	
<b>School status</b>				18.38
In school	330 (81.9)	73 (18.1)	1	0.000
Out of school	379 (92)	33 (8)	2.54 (1.64, 3.93)*	
<b>Sex</b>				
Male	472 (88.7)	60 (11.3)	1.52 (1.009, 2.311)*	4.04
Female	237 (83.7)	46 (16.3)	1	0.04
<b>Level of youth education</b>				
Illiterate	6 (60)	4 (40)	7.34 (1.54, 34.96)	12.93
Read and write	3 (50)	3 (50)	11.0 (1.74, 69.52)	0.04
Grade 1-4	30 (83.3)	6 (16.7)	2.20 (0.62, 7.81)	
Grade 5-8	70 (85.4)	12 (14.6)	1.89 (0.63, 5.68)	
Grade 9-10	372 (84.2)	70 (15.8)	2.07 (0.80,5.36)	
Grade 11-12	154 (86)	25 (14)	1.79 (0.65, 4.89)	
Above grade 12	55 (91.8)	5 (8.3)	1	
<b>Religion</b>				41.54
Orthodox	203 (83.2)	41 (16.8)	1	0.00
Muslim	51 (89.5)	6 (10.5)	0.58 (0.23,1.45)	
Protestant	208 (90)	23 (10)	0.55 (0.32,0.94)	
Catholic	106 (69.7)	46 (30.3)	2.15 (1.33,3.48)*	
Wakefata	120 (93.3)	6 (5.7)	0.33 (0.15,0.73)*	
Others	2 (66.7)	1(33.3)	2.48 (0.22,27.95)	
<b>Ethnicity</b>				13.61
Oromo	576 (86)	94 (14)	1	0.03
Gurage	16 (66.7)	8 (33.3)	3.06 (1.28, 7.36)*	
Amhara	24 (77.4)	7(22.6)	1.79 (0.75, 4.27)	
Tigre	8 (88.9)	1 (11.1)	0.77 (0.09, 6.19)	
Konso	10 (66.7)	5(33.3)	4.08 (1.42, 11.74)*	
Burji	44 (88)	11(20)	1.53 (0.76, 3.07)	
Other	8 (72.7)	3(27.3)	2.29 (0.59, 8.82)	

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<b>Father education</b>				16.57
Illiterate	304 (89.4)	36 (10.6)	3.69 (1.80, 7.57)*	0.01
Read and write	42 (84)	8 (16)	2.29 (0.86, 6.14)	
Grade 1-4	85 (88.5)	11 (11.5)	3.38 (1.39, 8.22)*	
Grade 5-8	118 (84.3)	22 (15.7)	2.35 (1.08, 5.09)*	
Grade 9-10	108 (90)	12 (10)	3.94 (1.66, 9.36)*	
Grade 11-12	20 (87)	3 (13)	2.92 (0.74, 11.44)	
Above grade 12	32 (69.6)	14 (30.4)	1	
<b>Mother education</b>				3.67
Illiterate	329 (86.8)	50 (13.2)	1.07 (0.46, 2.31)	0.72
Read and write	54 (90)	6 (10)	0.75 (0.18, 3.25)	
Grade 1-4	97 (89.8)	11 (10.2)	0.66 (0.18, 2.50)	
Grade 5-8	109 (86.5)	17 (13.5)	0.54 (0.16, 1.86)	
Grade 9-10	57 (86.4)	9 (13.6)	0.58 (0.17, 2.00)	
Grade 11-12	20 (76.9)	6 (23)	0.30 (0.07, 1.29)	
Above grade 12	43 (86)	7 (14)	1	
<b>Living arrangements</b>				46.82
Both parents	413(85.9)	68 (14.1)	1	0.00
Single parents	37 (86)	6 (14)	0.98 (0.40,2.42)	
Brothers/sisters	33 (66)	17 (34)	3.13 (1.65,5.92)*	
Alone	126 (94)	8 (6)	0.39 (0.18, 0.82)*	
My friend	77 (91.7)	7 (8.3)	0.55 (0.24, 1.24)	
Others	12 (52.2)	11(47.8)	5.67 (2.36,13.12)*	
<b>Source of income</b>				18.94
Working	236 (94.4)	14 (5.6)	1	0.00
Parents	412 (83.4)	82 (16.6)	3.36 (1.86, 6.05)*	
Scholarship	46 (88.5)	6 (11.5)	2.19 (0.803, 6.02)	
Relatives	15 (78.9)	4 (21.1)	4.49 (1.32, 15.34)*	

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\*=significant, 1=reference

## **Factors associated with sexual experience of youths**

In the multivariate analysis of socio-demographic characteristics of sexual activity of youths, age, youth education, school status, father education, living arrangement and source of income have come out to be significant influencers of sexual behaviors of youths.

Age of youths has statistically significant effect on sexual behavior of youths. The odds of ever having sex among youths whose age were 20-24 years were about three times higher than those age 15-19 years (AOR=3.24, 95%CI=1.56, 6.75).

School status of youths has strong significant association with ever having sex of youths. The odds of ever having sex among out-of-school youths were about three times fold higher compared to in-school youths (AOR=2.76, 95%CI= 1.76, 4.35).

Father education of youths has influence on sexual behavior of youths. The odds of ever having sex among youths whose father was illiterate was more than two times higher compared to those whose father was above grade twelve (AOR=2.39, 95%CI=1.09, 4.35).

Living arrangements of youths was also an important factor influencing on sexual behavior of youths. The odds of ever having sex among youths who were living alone and with their friends were three times and two times respectively, higher than those lived with their both parents (AOR=3.22, 95%CI=1.49, 6.94, AOR=2.33, 95%CI=1.02, 5.36 respectively).

Source income of youths was found to have an influence on sexual activity. The odds of ever having sex among youths their source of income from parents was two times higher compared to youths their source of income was from working (AOR=2.18, 95%CI=1.15, 4.15).

**Table 4 Multivariate analysis of ever had sex by socio-demographic variable among youths in Yaballo town, Borana zone, Oromiya region, 2011/12.**

Characteristics	COR(95% CI)	Adjusted odd ratio (95%CI)
<b>Age</b>		
15-19	1	1
20-24	4.22 (2.21, 8.05)*	3.24 (1.56, 6.75)*
<b>Religion</b>		
Orthodox	1	1
Muslim	0.58 (0.23, 1.45)	0.69 (0.22, 2.18)
Protestant	0.55 (0.32, 0.94)	0.67 (0.35, 1.17)
Catholic	2.15 (1.33,3.48)*	2.65 (1.44, 4.87)*
Wakefata	0.33 (0.15, 0.73)*	0.36 (0.16, 0.96)*
Other	2.48 (0.22,27.95)	1.16 (0.43 , 5.32)
<b>School status</b>		
In school	1	1
Out-of-school	2.54 (1.64, 3.93)*	2.76 (1.76, 4.35)*
<b>Youth education</b>		
Illiterate	7.34 (1.54, 34.96)*	17.87 (3.38, 94.45)*
Read and write	11.0 (1.74, 69.52)*	23.00 (3.19, 165.6)*
Grade 1-4	2.20 (0.62, 7.81)	4.14 (1.07, 15.92)*
Grade 5-8	1.89 (0.63, 5.68)	2.63 (0.83, 8.33)
Grade 9-10	2.07 (0.80,5.36)	2.37 (0.87, 6.45)
Grade 11-12	1.79 (0.65, 4.89)	2.36 (0.82, 6.80)
Above grade 12	1	1
<b>Father education</b>		
Above grade 12	1	1
Illiterate	3.69 (1.80, 7.57)*	2.39 (1.096, 5.22)*
Read and write	2.29 (0.86, 0.14)	1.61 (0.57, 4.59)
1-4	3.38 (1.39,8. 22)*	1.76 (0.68, 4.58)
5-8	2.35 (1.08, 5.09 )*	1.81 (0.79, 4.11)
9-10	3.94 (1.66, 9.36)*	2.90 (1.16, 7.25)*
11-12	2.92 (0.74, 11.44)	2.32 (0.57, 9.46)
<b>Sex</b>		
Female	1	1
Male	1.53 (1.01, 2.31)*	0.85 (0.53, 1.37)
<b>Living arrangements</b>		
Both parents	1	1
Single parents	0.98 (0.40,2.42)	1.68 (0.61, 4.68)
Brother/sisters	3.13 (1.65,5.92)*	2.32 (1.18, 4.58)*
Alone	0.39 (0.18, 0.82)*	3.22 (1.49, 6.94)*
Friends	0.55 (0.24, 1.24)	2.33 (1.02, 5.36)*
Other	5.67 (2.36,13.12)*	4.05 (1.59, 10.32)*
<b>Source of income</b>		
Working	1	1
Parents	3.36 (1.86, 6.05)*	2.18 (1.15, 4.15)*
Scholarship	2.19 (0.80, 6.02)	1.57 (0.52, 4.73)
Relative	4.49 (1.32, 15.34)*	2.20 (0.50, 9.69)

\*=significant, 1=reference

The other factors that influence sexual behavior of in-school and out-of-school youth were substance use, watching pornographic films and reading magazines related to sexual intercourse and peer influences.

The odds of ever having sex among Khat chewers were 12.71 fold higher than non-chewers youths (COR =12.71; 95%CI=7.20, 22.45).The odds of ever having sex among alcohol drinkers were 12.36 times higher than non-drinkers (COR=12.36, 95%CI=5.35, 28.56).The odds of ever having sex among drug took were 9.04 times higher compared to those youths not drug took (COR=9.04, 95%CI=2.19, 37.19). But the frequency of Khat chewing, alcohol drank and drug took does not have influence on sexually experience of youths except cigarette smoking

The odds of ever having sex among youths exposure to pornographic films were 3.54 times higher compared to youths not watched sex films (COR=3.54, 95%CI=2.32, 5.42).

The odds of ever having sex among youths having sexually experienced peers and friends use substance were about 13.78 times and 14 times respectively, higher than those don't had it (COR=13.78, 95%CI=7.41, 25.61, COR=14.42, 95%CI=6.60, 31.48 ).

**Table 5 Bivariate analysis of substance use, peer influence and sexual activity among youths in Yaballo town, Borana zone, Oromiya, 2012**

Characteristics	Ever had sexual Intercourse N <sub>o</sub> (%)		COR 95%CI	(X <sup>2</sup> )chi square, P-value
	Yes	NO		
<b>Khat chewing</b>				110.88
Yes	480 (60.7)	229 (32.3)	12.72 (7.20, 22.45)*	0.00
No	15(14.2)	91 (85.8)	1	
<b>Alcohol consumption</b>				53.51
Yes	302 (42.6)	407 (57.4)	12.37 (5.35, 28.56)*	0.00
No	6(5.7)	100 (94.3)	1	
<b>Cigarette smoking</b>				22.23
Yes	159 (22.4)	550 (77.6)	9.93 (3.11, 31.71)*	0.00
No	3 (2.8)	103 (97.2)	1	
<b>Drug took</b>				13.50
Yes	105 (14.8)	604 (65.4)	9.040 (2.19, 37.19)*	0.00
No	2 (1.9)	104 (98.1)	1	
<b>Sexual intercourse before 15 years</b>				29.35
Yes	181(25.4)	527 (74.4)	17.69 (4.32, 72.41)*	0.00
No	2 (1.9)	103 (98.1)	1	
<b>Watching pornographic films and read magazine</b>				37.42
Yes	484 (68.3)	225 (31.7)	3.55 (2.32, 5.42)*	0.00
No	40 (37.7)	66 (62.3)	1	
<b>Peer Pressure to have sex</b>				59.91
Yes	328 (46.3)	381 (53.7)	12.18 (5.58, 26.58)*	0.00
No	7 (6.6)	99 (93.4)	1	
<b>Having sexually experienced peers</b>				1.03
Yes	452 (63.8)	257 (36.2)	13.78 (7.41, 25.61)*	0.00
No	12 (11.3)	94 (88.7)	1	
<b>Peers using substance abuse</b>				71.84
Yes	358 (50.5)	351 (49.5)	14.43 (6.61, 31.49)*	0.00
No	7 (6.6)	99 (93.4)	1	

\*=significant, 1=reference category

After controlling for the effects of potentially confounding variables using multivariate logistic regression Khat, alcohol and drug have influence on sexual activity of youths. The odds of ever having sex among Khat chewers were 7.63 fold higher compared to those non-chewers (AOR=7.63, 95%CI=4.15, 14.02).The odds of ever having sex among alcohol drinkers were 4.63 times greater than those non-drinkers alcohols (AOR=4.63, 95%CI=1.74, 12.28).The odds of ever having sex among drug took youths were 2.4 fold greater than those not drug took (AOR=2.42, 95%CI=1.06, 5.52)

Having sex before 15 years has also effect on sexual behavior of youths. The odds of ever having sex among youths had sex before 15 year was thirteen times higher compared to those youths not had sex before 15 year (AOR=13.08, 95%CI=3.17,53.99).

Having sexually active peers and peers use substance were found to have influence on sexual behavior of youths. The odds of ever having sex among youths who had sexually active peers and peers use substance were five times and four times respectively ,greater than those not had it (AOR=4.92, 95%CI=2.41, 10.05 and AOR=4.19, 95%CI=1.79, 9.82 ).

Watching pornographic film was found to be significant with their engagement in sexual practices of youths. The odds of ever having sex among youths watching pornographic film were 2.7 fold higher compared to those not had watched pornographic film (AOR=2.69, 95%CI=1.75, 4.15).

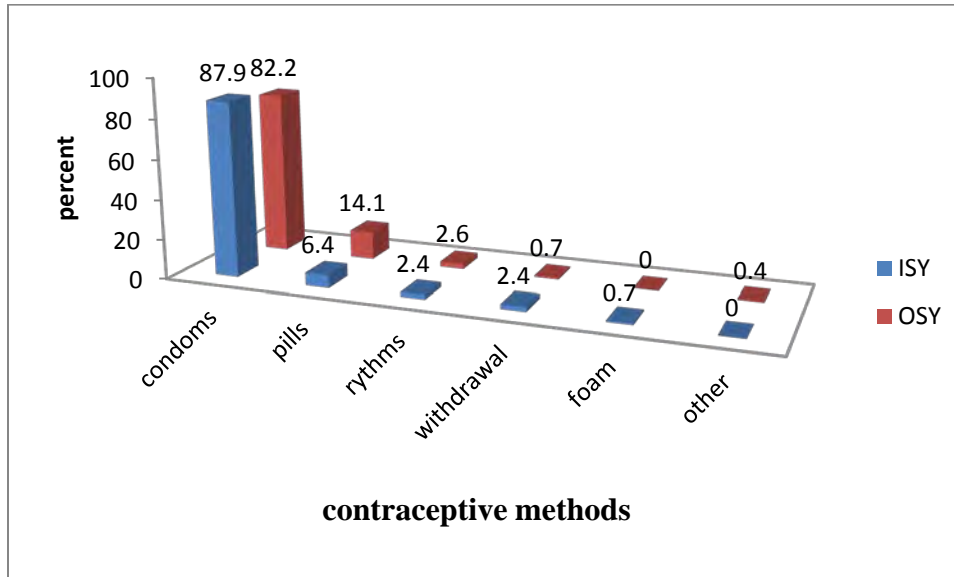
**Table 6 Multivariate analysis of ever had sex by substance use and peer influence among youths in Yaballo town, Borana zone, Oromiya region, 2011/12.**

<b>Characteristics</b>	<b>COR(95%CI)</b>	<b>Adjusted odd ratio (95%CI)</b>
<b>Khat chewing</b>		
Yes	12.72 (7.20, 22.45)*	7.63 (4.15, 14.02)*
No	1	1
<b>Alcohol drank</b>		
Yes	12.37 (5.35, 28.57)*	4.63 (1.74, 12.28)*
No	1	1
<b>Cigarette smoked</b>		
Yes	9.93 (3.11, 31.71)*	1.39 (0.34, 5.47)
No	1	1
<b>Drug took</b>		
Yes	9.04 (2.20, 37.19)*	2.42 (1.06, 5.52)*
No	1	1
<b>Had Sex before 15 years</b>		
Yes	17.69 (4.32, 72.41)*	13.08 (3.17, 53.99)*
No	1	1
<b>Watching pornographic films</b>		
Yes	3.55 (2.32, 5.42)*	2.69 (1.75, 4.15)*
No	1	1
<b>Peer pressure to had sex</b>		
Yes	12.17 (5.58, 26.58)*	1.94 (0.78, 4.85)
No	1	1
<b>Had sexually active peers</b>		
Yes	13.78 (7.41, 25.61)*	4.92 (2.41, 10.05)*
No	1	1
<b>Peers use substance</b>		
Yes	14.42 (6.61, 31.48)*	4.19 (1.79, 9.82)*
No	1	1

**\*=significant, 1=reference category**

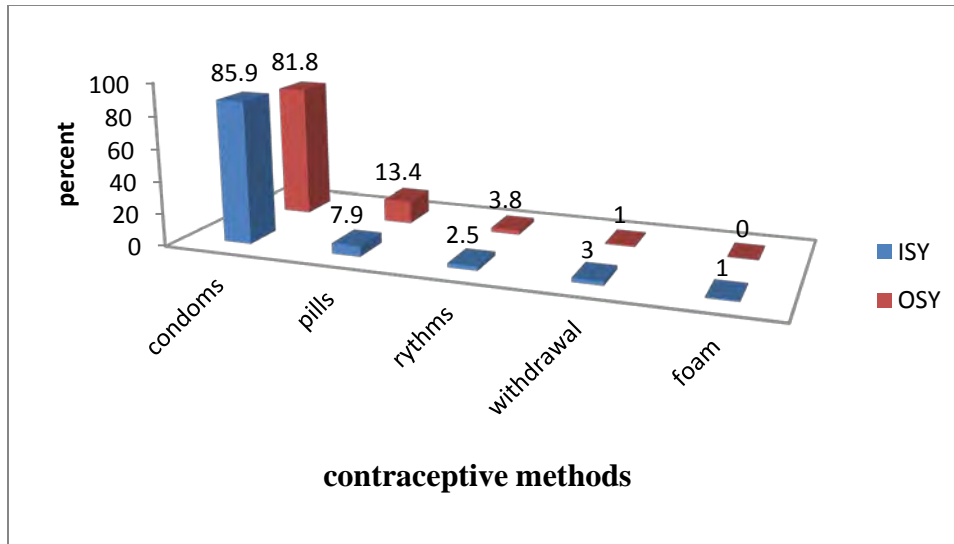
## Contraceptive use

Amongst the sexually active youth, 57.9% (42.4% ISY, 71% OSY) reported contraceptive use at first intercourse. Of these 84.1% (87.9% ISY, 82.2% OSY) ,11.7% (6.4% ISY,14.1% OSY), 2.6% (2.4% ISY, 2.6% OSY), 1.2% (2.4% ISY,0.7% OSY), 0.2%(0.7% ISY only),and 0 .2% (0.4% OSY only) youths reported using condom, pills, rhythms withdrawal, foam and other respectively.



**Figure 3 contraceptive methods used at sexual debut in Yaballo Town, Borana Zone, Oromiya 2012**

Overall, 69.4% (61.2% ISY, 77% OSY) youths reported to use contraceptive methods during the last sexual intercourse. Amongst these the most common contraceptive used during the last sexual intercourse was condom 83.4% (85.6 % ISY, 81.8% OSY). In-school youth were reported to use condoms than out-of-school, where as out-of-school used pills than in-school youths both during the first and last sexual intercourse.



**Figure 4 contraceptive methods used at last intercourse youths in Yaballo Town, Borana Zone, Oromiya, 2011/12**

In general, 89.3% (84.1% ISY, 94.4% OSY) youths reported that they were using some method to prevent HIV/AIDS infection; 47.1% (43.7% ISY, 50.4% OSY) use condoms, 20.5% (25.4% ISY, 16.2% OSY) abstinence and 29.4% (28.3% ISY, 30.3% OSY) faithful one to one relationship.

Overall, among the sexually active males, 22 % (13.4% ISY, 29.4% OSY) reported having had sexual intercourse with commercial sex workers, of those 44.2% (44.8% ISY, 44% OSY) had used condom sometimes followed by 31.7 % (27.6% ISY, 33.3% OSY) always.

**Table 7 percentage distribution of contraceptive use among in-school and out-of-school youths in Yaballo Town, Borana Zone, Oromiya, 2012**

<b>Variables</b>	<b>In school(403)</b>	<b>Out of school (412)</b>	<b>Total (both)</b>
<b>Contraceptive use at first intercourse</b>			
yes	140 (42.4)	269 (71)	409 (57.9)
No	173 (52.4)	110 (29)	283 (39.9)
Don't know	10 (3)	0	10 (1.4)
No response	7 (2.1)	0	7 (1)
<b>Contraceptive use at last intercourse</b>			
yes	202 (61.2)	292 (77)	494 (69.4)
No	114 (34.5)	87 (23)	201 (28.3)
Don't know	5 (1.5)	0	5 (0.7)
No response	9 (2.7)	0	9 (1.3)
<b>Currently method used to prevent HIV/AIDS</b>			
Yes	339 (84.1)	389 (94.4)	728 (89.3)
No	64 (15.9)	23 (5.6)	87 (10.7)
<b>Methods used currently to prevent HIV/AIDS</b>			
condom	147 (43.7)	196 (50.4)	343 (47.1)
Abstinence	86 (25.4)	63 (16.2)	149 (20.5)
Faithful	96 (28.3)	118 (30.3)	214 (29.4)
Don't know	9 (2.7)	12 (3.1)	21 (2.9)
No response	1 (0.3)	0	1 (0.1)
<b>Condom use with partner</b>			
sometimes	112 (33.9)	126 (33.2)	238 (33.6)
Most of time	55 (16.7)	42 (11.1)	97 (13.7)
Always	80 (24.2)	144 (38)	224 (31.6)
Don't know	83(25.2)	67 (17.7)	150 (21.2)
<b>Sexual intercourse with CSW(male)</b>			
Yes	29 (13.4)	75 (29.4)	104 (22.0)
No	188 (86.6)	180 (70.6)	368 (78.0)
<b>Condom use with CSW</b>			
Not at all	1 (3.4)	3 (4)	4 (3.8)
Sometimes	13 (44.8)	33 (44)	46 (44.2)
Most of time	5 (17.2)	9 (12)	14 (13.5)
Always	8 (27.6)	25 (33.3)	33 (31.7)
Don't know	2 (6.9)	5 (6.7)	7 (6.7)

## Factors associated with unsafe sex

In the Bivariate analysis demonstrated that most of the socio-demographic characteristics of youths were not associated with unsafe sex during the last sexual intercourse.

Sex of youths were statistically associated with unsafe sex ( $X^2=30.01$ ;  $P=0.00$ ).

Religion of youths has a significant association with unsafe sex ( $X^2=23.87$ ,  $P=0.00$ ). This shows that there was a difference in unsafe sex between religion.

Living arrangements of youths appears to have statistically significant relationship with unsafe sex ( $X^2=19.23$ ,  $P=0.02$ ).

Source of income was assumed to have an effect on the unsafe sex of youths. The chi-square result shows that, the income of respondent was statistically relationship with unsafe sex ( $X^2=10.09$ ,  $P=0.02$ ).

**Table 8 Bivariate analysis of not using condoms during the last intercourse by socio-demographic characteristics among youths in Yaballo town, Borana Zone, Oromiya, 2012**

Characteristics	Unsafe d sex		COR 95%CI	X <sup>2</sup> P-value
	Yes	No		
<b>Sex</b>				30.01
Male	327 (69.3)	145 (30.7)	2.43 (1.77, 3.36)*	0.000
Female	114 (48.1)	123 (51.9)	1	
<b>Age</b>				0.45
15-19	292 (61.3)	184 (38.7)	1	0.50
20-24	149 (63.9)	84 (36.1)	0.90 (0.65, 1.24)	
<b>Religion</b>				23.87
Orthodox	139 (66.2)	71 (33.8)	1	0.00
Muslim	30 (56.6)	23 (43.4)	0.67 (0.36, 1.23)	
Protestant	125 (59.2)	86 (40.8)	0.74 (0.50, 1.10)	
Catholic	55 (50)	55 (50)	0.51 (0.32, 0.82)*	
Wakefata	92 (75.4)	30 (24.6)	1.57 (0.95, 2.59)	
Others	1 (33.3)	2 (66.7)	1.16 (0.48, 2.80)	
<b>Ethnicity</b>				2.29
Oromo	372 (62.9)	219 (37.1)	1	0.89
Gurage	9 (50)	9 (50)	0.27 (0.23, 1.51)	
Amhara	15 (62.5)	9 (37.5)	0.98 (0.42, 2.28)	
Tigre	5 (62.5)	3 (37.5)	0.98 (0.23, 4.15)	
Konso	8 (53.3)	7 (46.7)	0.67 (0.24, 1.88)	
Burji	28 (62.2)	17 (37.8)	0.97 (0.52, 1.81)	
Others	4 (50)	4 (50)	0.59 (0.15, 2.38)	

<b>Attending school</b>				0.01
In school	206 (62.4)	124 (37.6)	1	0.91
Out of school	235 (62)	144 (38)	1.02 (0.75, 1.38)	
<b>Level of youth education</b>				4.57
Illiterate	7 (70)	3 (30)	1.135 (0.26, 4.91)	0.60
Read and write	2 (33.3)	4 (66.7)	0.24 (0.04, 1.46)	
1-4	19 (59.4)	13 (40.6)	0.71 (0.29, 1.75)	
5-8	48 (68.6)	22 (31.4)	1.06 (0.50, 2.26)	
9-10	231 (60.9)	148 (39.1)	0.76 (0.42, 1.38)	
11-12	97 (61.8)	60 (38.2)	0.79 (0.41, 1.51)	
Above grade 12	37 (67.3)	18 (32.7)	1	
<b>Mother education</b>				3.87
Illiterate	200 (60.8)	129 (39.2)	1.12 (0.59, 2.13)	0.69
Read and write	38 (70.4)	16 (29.6)	1.71 (0.74, 3.97)	
1-4	63 (64.9)	34 (35.1)	1.33 (0.64, 2.78)	
5-8	68 (62.4)	41 (37.6)	1.19 (0.58, 2.45)	
9-10	37 (64.9)	20 (35.1)	1.33 (0.59, 3.01)	
11-12	10 (50)	10 (50)	0.72 (0.25, 2.09)	
Above grade 12	25 (58.1)	18 (41.9)	1	
<b>Living arrangements</b>				13.42
Both parents	278 (67.3)	135 (32.7)	1	0.02
Single parents	18 (48.6)	19 (51.4)	8.24 (1.73, 39.32)*	
Brothers/sisters	19 (57.6)	14 (42.4)	1.52 (0.74, 3.12)	
Alone	72 (57.1)	54 (42.9)	1.54 (1.03, 2.32)*	
Friends	44 (57.1)	33 (42.9)	1.54 (0.94, 2.54)	
Others	10(43.5)	13 (56.5)	2.06 (0.29, 14.78)	
<b>Source of income</b>				10.08
Working	137 (58.1)	99 (41.9)	1	0.02
Parents	274 (66.5)	138 (33.5)	0.69 (0.50, 0.97)*	
Scholarship	24 (52.2)	22 (47.8)	1.27 (0.67, 2.39)	
Relatives	6 (40)	9 (60)	2.08 (0.72, 6.02)	

\*=significant, 1=reference category

## Factors associated with unsafe sex

In the multivariate analysis, sex, religion, living arrangements and source income of youth has influence on unsafe sex of youths.

The odds of unsafe sex among male youths were 2.30 times higher compared to female youths (AOR=2.30, 95%CI=1.63, 3.24). The odds of unsafe sex among youths who living with their mother were less to involve in unsafe sex (AOR=0.13, 95%CI=0.02, 0.64). The odds of unsafe sex among youths their source of income from parents were 1.46 fold higher compared to those source of income was from working (AOR=1.46, 95%CI=1.03, 2.07).

**Table 9 Multivariate analysis of unsafe sex by socio-demographic characteristics among youths in Yaballo town, Borana zone, Oromiya region, 2011/12**

Variable	COR(95%CI)	Adjusted OR 95%CI
<b>Sex</b>		
Male	2.43 (1.76,3.35)*	2.30 (1.63, 3.24)*
Female	1	1
<b>Religion</b>		
Orthodox	1	1
Muslim	0.67 (0.36, 1.23)	0.69 (0.36, 1.32)
Protestant	0.74 (0.45, 1.10)	0.81 (0.54, 1.23)
Catholic	0.51 (0.32, 0.82)*	2.03 (1.24, 3.32)*
Wakefata	1.57 (0.95, 2.59)	1.26 (0.75, 2.13)
<b>Living arrangements</b>		
Both parents	1	1
Single parents	8.24 (1.73, 39.32)*	0.13 (0.03, 0.64)*
Brother/sisters	4.12 (0.75, 22.77)	2.84 (0.44, 18.28)
Alone	1.54 (1.03, 2.32)*	1.09 (0.64, 1.84)
Friends	1.54 (0.94,2.54)	0.98 (0.12, 7.79)
Other	2.06 (0.29, 14.78)	1.72 (0.69, 4.30)
<b>Source of income</b>		
Working	1	1
Parents	0.69 (0.50, 0.97)*	1.46 (1.03, 2.07)*
Scholarship	1.27 (0.67, 2.39)	1.06 (0.54, 2.10)
Relatives	2.08 (0.72, 6.02)	0.44 (0.14, 1.39)

\*=significant, 1=reference category

In the Bivariate analysis among the substance use only Khat chewing has strong association with not using condoms during the last sexual intercourse ( $X^2=23.77$ ,  $P=0.00$ ).

Having sex before 15 years was significantly associated with unsafe sex of youths( $X^2 =13.27$ ,  $P=00$ ).

Sexually experienced friends, peer pressure and peers using substance were statistically associated with unsafe sex during the last sexual intercourse( $X^2=27.71$ ,  $P=0.00$ ,  $X^2=4.71$ ,  $P=0.03$  and  $X^2=4.92$ ,  $P=0.02$  respectively).

The chi-square indicates that watching pornographic films were statistically significant with unsafe sex ( $X^2=55.95$ ,  $P=0.00$ )

**Table 10 Bivariate analysis of not using condoms during the last sexual intercourse by substance use, peer influence among youths in Yaballo town, Borana zone, Oromiya, 2011/12.**

Characteristics	Unsafe sex No (%)		COR 95%CI	X <sup>2</sup> P-value
	Yes	No		
<b>Khat chewing</b>				23.77
Yes	328 (74.4)	113 (25.6)	2.22 (1.60, 3.06)*	0.00
No	152 (56.7)	116 (43.3)	1	
<b>Alcohol drank</b>				2.53
Yes	198 (44.9)	243 (55.1)	1.28 (0.94, 1.75)	0.11
No	104 (38.8)	164 (61.2)	1	
<b>Cigarette smoked</b>				0.52
Yes	95 (21.5)	346 (78.5)	0.87(0.61, 1.26)	0.47
No	64 (23.9)	204 (76.1)	1	
<b>Drug took</b>				0.88
Yes	61 (13.8)	380 (86.2)	0.82 (0.54, 1.24)	0.33
No	44 (16.4)	224 (83.6)	1	
<b>Sexually intercourse before 15 years</b>				13.28
Yes	133 (30.2)	307 (69.8)	1.99 (1.37, 2.88)*	0.00
No	48 (17.9)	220 (82.1)	1	
<b>Watching pornographic films and read magazines</b>				55.95
Yes	346 (78.5)	95 (21.5)	3.43 (2.47, 4.77)*	0.00
No	138 (51.5)	130 (48.5)	1	
<b>Peer pressure to have sex</b>				4.72
Yes	218 (49.4)	223 (50.6)	1.40 (1.03, 1.91)*	0.03
No	110 (41)	158 (59)	1	
<b>Having sexually experienced peers</b>				24.71
Yes	312 (70.7)	129 (29.3)	2.21 (1.61, 3.03)*	0.00
No	140 (52.2)	128 (47.8)	1	
<b>Peers using substance</b>				4.92
Yes	23 (53.7)	204 (46.3)	1.41 (1.04, 1.91)*	0.03
No	121 (45.1)	147 (54.9)	1	

\*=significant, 1=reference category

In the multivariate analysis of substance use and peer influence vs. unsafe sex;

Khat chewing of youths has effect on unsafe sex. The odds of unsafe sex among Khat chewers were 1.8 times higher compared to those non-chewers (AOR=1.76, 95%CI, 1.20, 2.57).

Having sex before 15 year has influence on unsafe sex of youths. The odds of unsafe sex among youths had sex before 15 year was 1.50 fold higher compared to those not had it (AOR=1.50, 95%CI=1.01, 2.23).

Having peer pressure to have sex and peer sexually active has influence on unsafe sex of youths. The odds of unsafe sex among youths having peer pressure to have sex and peer sexually active were two times and three times respectively, higher compared to those not had it (AOR=1.96, 95%CI=1.29, 2.99, AOR=2.82, 95%CI=1.97, 6.06).

Watching pornographic film was also important factor influence unsafe sex of youths. The odds of unsafe sex among youths watched film sex was three fold higher than those not watched film sex (AOR=3.09, 95%CI=2.16, 4.43).

**Table 11 Multivariate analysis of unsafe sex by substance use and peer influence among youths in Yaballo town, Borana zone, Oromiya, 2012.**

Characteristics	COR(95%CI)	Adjusted OR(95%CI)
<b>Khat chewing</b>		
Yes	2.22 (1.60, 3.06)*	1.76 (1.20, 2.57)*
No	1	1
<b>Sexually intercourse before 15 years</b>		
Yes	1.99 (1.37, 2.88)*	1.50 (1.01, 2.23)*
No	1	1
<b>Peer pressure to have sex</b>		
Yes	1.40 (1.03, 1.91)*	1.96 (1.29, 2.99)*
No	1	1
<b>Having sexually active peers</b>		
Yes	2.21 (1.61, 3.03)*	2.82 (1.97, 6.06)*
No	1	1
<b>Peers substance use</b>		
Yes	1.41 (1.04, 1.91)	1.41 (0.93, 2.13)
No	1	1
<b>Watching pornographic films</b>		
Yes	3.43 (2.47, 4.77)*	3.09 (2.16, 4.43)*
No	1	1

\*=significant, 1=reference category

### Prevalence of Single health risk behavior

Percentages for health risky behaviors were higher in the out-of-school than in-school youths, with the exception of those sexually active during the last sexual intercourse and having multiple sex partners during the last six months.

For the ISY the most common risk behaviors were 84.5% currently being sexually active , 69.7% watching pornography films , 65.1% having two or more sexually partner during six months , 58.1% currently chewing Khat , 38% current alcohol use , 37.6% not using condoms during the last sexual intercourse and 23.8% having the first sexual intercourse before 15 years .

For the OSY the most common risk behaviors were 75.5% currently being sexually active ,73.8% watching pornographic film, 63.6% chewed Khat, 46.6% had multiple sex partners during the last six months, 43.4% had drank alcohol, 40.1% not using condoms during the last sexual intercourse, 36.2% having the first sexual experience before 15 years, 30.1% took drug and 26.4% smoked cigarettes.

**Table 12 prevalence of single health risk behaviors among in-school and out-of-school youths in Yaballo Town, Borana Zone, Oromiya Region, 2011/12**

Single heath risk behaviors	In school	Out of school	Total
<b>Khat chewing</b>			
yes	234 (58.1)	284 (68.9)	518 (63.6)
No	169 (41.9)	128 (31.1)	297 (36.4)
<b>Frequency of Khat chewing</b>			
Every day	56 (23.9)	101 (35.6)	157 (30.3)
Every two days	40 (17.1)	36 (12.7)	76 (14.7)
Every week	38 (16.2)	25 (8.8)	63 (12.2)
Every month	5 (2.1)	8 (2.8)	13 (2.5)
Occasionally	80 (34.2)	114 (40.1)	194 (37.5)
No response	15 (6.4)	0(0)	15 (2.9)
<b>Sexual desire</b>			
Increase than the usual	155 (66.2)	236 (83.1)	391 (75.5)
I do have les feeling	60 (25.6)	48 (16.9)	108 (20.8)
No difference than usual	16 (6.8)	0	16 (3.1)
I don't know	3 (1.3)	0	3 (0.6)
<b>Alcohol consumption</b>			
yes	153 (38)	179 (43.4)	332 (40.7)
No	250 (62)	233 (56.6)	483 (59.3)
<b>Frequency of Alcohol consumption</b>			
Every day	17 (11.1)	43 (24)	60 (18.1)
Every two days	24 (15.7)	22 (12.3)	46 (13.9)
Every week	36 (23.5)	21 (11.7)	57 (17.2)

Every month	21 (13.7)	7 (3.9)	28 (8.4)
Occasionally	51 (33.3)	86 (48)	137 (41.3)
No response	4 (2.6)	0	4 (1.2)
<b>Sexual desire</b>			
Increase than the usual	128 (83.7)	155 (86.6)	283 (85.2)
I do have less feeling	12 (7.8)	12 (6.7)	24 (7.2)
No difference than usual	6 (3.9)	10 (5.6)	16 (4.8)
I don't know	6 (3.9)	2 (1.1)	8 (2.4)
No response	1 (0.7)	0	1 (0.3)
<b>Cigarette smoking</b>			
yes	78 (19.4)	108 (26.2)	186 (22.8)
No	325 (80.6)	304 (73.8)	629 (77.2)
<b>Frequency of Cigarette smoking</b>			
Every day	17 (21.8)	53 (49.1)	70 (37.6)
Every two days	17 (21.8)	12 (11.1)	29 (15.6)
Every week	23 (29.5)	7 (6.5)	30 (16.1)
Every month	2 (2.6)	4 (3.7)	6 (3.2)
Occasionally	18 (23.1)	32 (29.6)	50 (26.9)
No response	1 (1.3)	0	1 (0.5)
<b>Took drug(marijuana, hashish)</b>			
yes	66 (16.4)	124 (30.1)	190 (23.3)
No	337 (83.6)	288 (69.9)	625 (76.7)
<b>Frequency of drug took</b>			
Every day	8 (12.1)	94 (75.8)	102 (53.7)
Every two days	15 (22.7)	7 (5.6)	22 (11.6)
Every week	19 (28.8)	4 (3.2)	23 (12.1)
Every month	5 (7.6)	3 (2.4)	8 (4.2)
Occasionally	19 (28.8)	16 (12.9)	35 (18.4)
<b>Alcohol and drug increase sexual desire</b>			
yes	235 (58.3)	217 (52.7)	452 (55.5)
No	168 (41.7)	195 (47.3)	363 (44.5)
<b>Sexual intercourse during the 6 months</b>			
yes	201 (84.5)	225 (75.5)	426 (79.5)
No	37 (15.5)	73 (24.5)	110 (20.5)
<b>Sexual intercourse before 15 year</b>			
yes	96 (23.8)	149 (36.2)	245 (30.1)
No	307 (76.2)	263 (63.8)	570 (69.9)
<b>Two or more sexual partner during 6 months</b>			
yes	155 (65.1)	139 (46.6)	294 (54.9)
No	83 (34.9)	159 (53.4)	242 (45.1)
<b>Not using condoms for the last Sexual intercourse</b>			
Yes	124 (37.6)	152 (38)	433 (37.8)
No	206 (62.4)	227 (62)	276 (62.2)
<b>Watching pornography films</b>			
yes	281 (69.7)	304 (73.8)	585 (71.8)
No	122 (30.3)	108 (26.2)	230 (28.2)
<b>Frequency of Watching pornographic films</b>			
most of times	68 (24.2)	142 (46.7)	210 (35.9)
Sometimes	169 (60.1)	146 (48)	315 (53.8)
Always	44 (16)	16 (5.3)	60 (10.3)

### Peer influence and behavior

As presented in table 13 below, more in-school (44.2%) than out-of-school youths (38.1%) reported having peer pressure to have sexual intercourse. A significantly greater proportion of out-of-school (61.2%) than in-school (52.6%) youths believed that their peers were sexually experienced. Among the total study youths their peers were used substance 44.8 % (42.2% ISY, 47.3% OSY). Overall, 14.1 % (11.2% ISY, 17% OSY) among youths their male close friend had sexual intercourse with CSW's. Out of the study participants 67.2 % (67.2 % ISY, 67.2% OSY) had discussed on safe sexual intercourse.

**Table 13 reported peer pressure of youth by school status in Yaballo Town, Borana Zone, Oromiya Region, Ethiopia, 2012**

Variable	In-school	Out-of-school	Total
<b>Peers pressure to have sex</b>			
yes	178 (44.2)	157 (38.1)	335 (41.1)
No	225 (55.8)	255 (61.9)	480 (58.9)
<b>Your peers sexually active</b>			
yes	212 (52.6)	252 (61.2)	464 (56.9)
No	191 (47.4)	160 (38.8)	351 (43.1)
<b>Peers use substance</b>			
yes	170 (42.2)	195 (47.3)	365 (44.8)
No	233 (57.8)	217 (52.7)	450 (55.2)
<b>Sexual partner</b>			
yes	251 (62.3)	289 (70.1)	540 (66.3)
No	152 (37.7)	123 (29.9)	275 (33.7)
<b>Number of partner</b>			
One	165 (40.9)	213 (51.7)	378 (46.4)
Two	88 (21.8)	81 (19.7)	169 (20.7)
More than two	84 (20.8)	76 (18.4)	160 (19.6)
Don't know	66 (16.4)	42 (10.2)	108 (13.3)
<b>Communication on safe sexual intercourse</b>			
yes	271 (67.2)	277 (67.2)	548 (67.2)
No	132 (32.8)	135 (32.8)	267 (32.8)
<b>Any sexual intercourse with CSWs among your male friends</b>			
yes	45 (11.2)	70 (17)	115 (14.1)
No	358 (88.8)	242 (83)	700 (85.9)
<b>your friend had become pregnant</b>			
yes	47 (11.7)	78 (18.9)	125 (15.3)
No	356 (88.3)	334 (81.1)	690 (84.7)

### **Co-occurrence of multiple health risk behaviors**

Of the 815 subjects, 10.9% reported no risks, 14.1% reported one risks, 32.5% reported two risks, 20.4% reported three risks, 15.3% reported four risks and 6.6% reported five risk behaviors. The risk behaviors of youth tend to fall into specific patterns. For the in- school youths had two risk behaviors ,the most common two risk behaviors were Khat chewing and being sexually active (39.6%), followed by being sexually active and not using condom (27%) and being sexually active and having first sex before 15 years (13.5%).

For out -of- school youths had two risk behaviors, the most common risk behaviors were Khat chewing and being sexually active (39.6%), followed by being sexually active and not using condom (25.3%), and alcohol use and being sexually active (7.1%).Out- of- school youths were more likely to report two health risk behaviors than in- school youths (58.2% vs. 41.8%).The majority of youths had two or more health risk behaviors.

**Table 14 Frequency of coexisting health risk behaviors among youth in Yaballo Town, Borana Zone, Oromiya Region, Ethiopia 2011/12**

<b>Variable</b>	<b>In school</b>	<b>Out of school</b>	<b>Total</b>
<b>No risk</b>	60	29	<b>89(10.9%)</b>
<b>One risk</b>			
Khat chewing	11 (18.6)	3 (5.4)	14 (12.2)
Alcohol use	2 (3.2)	2 (3.6)	4 (3.5)
Current smoking	4 (6.8)	1 (1.8)	5 (4.3)
Currently sexual active	36 (61)	45 (80.4)	81 (70.4)
Having first sexual intercourse before 15 years	1 (1.7)	0	1 (0.9)
Not using condoms during last intercourse	5 (8.5)	5(8.9)	10 (8.7)
<b>Total</b>	<b>59</b>	<b>56</b>	<b>115 (14.1%)</b>
<b>Two risk</b>			
Khat and Alcohol drinking	2 (1.8)	2 (1.3)	4 (1.5)
Khat and smoking	2 (1.8)	7 (4.5)	9 (3.4)
Khat and sexual active	44 (39.6)	61 (39.6)	105 (39.6)
Khat and first sex before 15 year age	5 (4.5)	10 (6.5)	15 (5.7)
Khat and not using condom	6 (5.4)	10 (6.5)	16 (6)
Alcohol and smoking	1 (0.9)	1 (0.6)	2 (0.8)
Alcohol and sexual active	4 (3.6)	11 (7.1)	15 (5.7)
Alcohol and not using condom	0	2 (1.3)	2 (0.8)
Smoking and sex before 15 year	1 (0.9)	0	1 (0.4)
Smoking and not using condom	1 (0.9)	0	1 (0.4)
Sexual active and first sex before 15 year	15 (13.5)	11 (7.1)	26 (9.8)
Sexual active and not using condom	30 (27)	39 (25.3)	69 (26.0)
<b>Total</b>	<b>111</b>	<b>156</b>	<b>265 (32.5%)</b>
<b>Three risk</b>			
Khat, alcohol and smoking	2 (2.4)	1 (1.2)	3(1.8)
Khat, alcohol drinking and sexual active	41 (48.2)	47 (57.3)	88 (57.7)
Khat, alcohol and first sex before 15 year	12 (14.1)	7 (8.5)	19 (11.4)
Khat, alcohol and not using condom	25(29.4)	26 (31.7)	51 (30.5)
Sexual active, sex before 15 year and not using condom	5(5.9)	1(1.2)	6 (3.6)
<b>Total</b>	<b>85</b>	<b>82</b>	<b>167 (20.4%)</b>
<b>Four risk</b>			
Khat, alcohol, smoking and sexual active	28 (50)	46 (66.7)	74 (59.2)
Khat, alcohol, sexual active and first sex before 15 year	19 (33.9)	19 (27.5)	38 (30.4)
Alcohol. smoking, sexual active and not using condom	9 (16.1)	4 (5.8)	13 (10.4)
<b>Total</b>	<b>56</b>	<b>69</b>	<b>125 (15.3)</b>
<b>Five risk</b>			
Khat, alcohol, smoking, sexual active, Sex before 15 year age and not using condom	20 (37)	34 (63)	<b>54 (6.6%)</b>

In the Bivariate analysis, for in-school youths, youth of education, father education and living arrangements were associated with one health risk behaviors. For in-school youths among socio-demographic characteristics ethnicity, sex, living arrangement and father education were significantly associated with two or more health risk behaviors. In-school youths who had peers with health risk behaviors were more likely to have multiple health risk behaviors than in-school youths whose peers had no health risk behaviors. Youths their peers who had health risk behaviors were significantly associated with two or more multiple health risk behaviors.

For out-of-school youths, mother education and living arrangements were significantly associated with one health risk behaviors of youths. For out-of-school youths, youths education, source of income, ethnicity, father education and peer involvement in health risk behaviors such as having sexually experienced peers, peers substance use and peer pressure to have sex were strongly associated with two or more multiple health risk behaviors.

**Table 15 Bivariate analyses of concurrent multiple health risk behaviors among in-school and out-of-school youth by Socio-demographic backgrounds and peer influence in Yaballo town, Oromiya region, 2011/12**

Variable	In school					Out of school				
	Total	One Risk N (%)	P-value	Two or More risk N (%)	p-value	Total	One Risk N (%)	P-value	Two or more Risk N (%)	p-value
<b>Age</b> 15-19 20-24	362 41	50 (14) 9 (22)	0.935	257 (71) 27 (66)	0.112	209 203	32 (15) 24 (11.8)	0.470	154 (74) 173 (85.2)	0.624
<b>Ethnicity</b> Oromo Gurage Amhara Tigre Konso Burgi Others	354 4 11 2 4 20 8	47 (13.2) 2 (5) 2 (19) 1 (50) 5 (25) 2 (25)	0.439	256 (72.3) 2 (5) 6 (54.5) 4 (100) 11 (55) 5 (62.5)	<b>0.000</b>	316 20 20 7 11 35 3	40 (12.6) 3 (15) 2 (10) 1 (14) 2 (18) 8 (23)	0.283	256 (81.1) 14 (70) 15 (75) 6 (86) 9 (82) 24 (68.5) 3 (100)	<b>0.008</b>
<b>Religion</b> Orthodox Protestant Catholic Wakefata Muslim Other	110 100 103 63 25 1	13 (12) 13 (13) 21 (20.3) 10(15.8) 2 (8)	0.668	81 (73.6) 76 (76) 54 (52.4) 48 (76.1) 23 (92) 1 (100)	0.486	134 131 49 65 32 1	19 (14.1) 6 (4.5) 17 (35) 8 (12) 5 (16) 1 (100)	0.895	103 (77) 119 (91) 26 (53) 55 (85) 24 (75)	0.077
<b>Sex</b> Male Female	257 146	41 (16) 18 (12.3)	0.608	178 (69.2) 106 (72.6)	<b>0.000</b>	275 137	31 (11.2) 25 (18.2)	0.177	225 (81.8) 102 (74.5)	0.054
<b>Youth education</b> Illiterate Read and write Grade 1-4 Grade 5-8 Grade 9-10 Grade 11-12 Above grade 12	264 139	42(15.9) 18 (12.9)	<b>0.000</b>	181 (68.6) 102 (73.3)	0.498	10 5 34 80 181 41 59	3 (8.8) 14 (17) 30 (16.5) 3 (7.3) 6 (11)	0.288	10 (100) 5 (100) 28 (82.4) 57 (72) 151 (83.5) 28 (68.3) 51 (86)	<b>0.000</b>
<b>Father education</b> Illiterate Read and write Grade 1-4 Grade 5-8 Grade 9-10 Grade 11-12 Above grade 12	138 33 38 79 61 15 39	22 (15.9) 5 (15.2) 2 (5.3) 8 (10.3) 12 (19.7) 1 (7) 9 (23)	<b>0.043</b>	94 (68.1) 24 (72.7) 34 (89.4) 59 (74.6) 41 (67.2) 12 (80) 20(51)	<b>0.020</b>	202 17 58 61 59 8 7	28 (14) 2 (11.7) 2 (11.7) 6 (10) 5 (8.2) 14 (24) 1 (12.5)	0.303	161 (80) 14 (82.3) 45 (78) 52 (85.3) 42 (71) 7 (87.5) 6(86)	<b>0.035</b>
<b>Mother education</b> Illiterate Read and write Grade 1-4 Grade 5-8 Grade 9-10 Grade 11-12 Above grade 12	152 46 54 56 35 18 42	26 (17) 4 (8.6) 8 (7.4) 8 (14.3) 6 (17) 4 (22) 3 (7)	0.069	97 (64) 37 (80.4) 43 (80) 40 (71.4) 23 (66) 12 (67) 32 (76)	0.129	227 14 54 70 31 8 8	32 (14) 2 (14.3) 7 (13) 11 (15.7) 3 (9.6) 1 (12.5)	<b>0.007</b>	178 (79) 11 (78.5) 44 (81.4) 55 (78.6) 26 (84) 6 (75) 2 (87.5)	0.747

<b>Living arrangement</b>			<b>0.001</b>		<b>0.000</b>			<b>0.000</b>		0.208
Parents	198	29 (14.6)		132 (67)		283	43(15)		218 (77)	
Father	19	7 (36.8)		11 (58)		14	1 (7)		12 (86)	
Mother	6	3 (50)		3 (50)		4	3 (17.6)		4 (100)	
Brother/sisters	33	8 (24.2)		15 (45.5)		17			9 (53)	
Alone	82	11 (13.4)		64 (78)		52	6 (11.5)		45 (86.5)	
Grand parents	5	1 (20)		4 (80)		1			1 (100)	
Cousin	6	1 (17)		5 (83)		4			4 (100)	
Friends	50	3(6)		42(84)		34	3(9)		12(91)	
<b>Income</b>			<b>0.889</b>		<b>0.900</b>			<b>0.991</b>		<b>0.000</b>
Working	75	9 (12)		62 (83)		175	15 (8)		157 (90)	
Parents	283	43 (15)		192 (68)		211	39 (18.5)		148 (70.2)	
Scholarship	32	4 (12.5)		23 (71.8)		20	2 (10)		10 (85)	
Relative	13	3 (23)		7 (54)		6			2 (83.3)	
<b>Peer pressure to have Sex</b>			<b>0.429</b>		<b>0.000</b>			<b>0.233</b>		<b>0.000</b>
Yes	178	13(7.3)		162(91)		157	16(10.1)		140(89.1)	
No	225	46(20.4)		122(54.2)		255	40(15.6)		187(73.4)	
<b>Peers having sexually experience</b>			<b>0.321</b>		<b>0.000</b>			<b>0.167</b>		<b>0.000</b>
Yes	212	25 (11.7)		179 (84.4)		252	27 (10.7)		224 (89)	
No	191	34 (17.8)		105 (54.9)		160	29 (18.1)		103 (64.3)	
<b>Peers using substance abuse</b>			<b>0.632</b>		<b>0.000</b>			<b>0.213</b>		<b>0.000</b>
Yes	170	9 (5.2)		160 (94.1)		195	13 (6.7)		180 (92.3)	
No	233	50 (21.4)		124 (53.2)		217	43 (17.8)		147 (67.7)	

**Bold numbers=significant**

### **Factors associated with concurrent risk behaviors of youths**

In the multivariate analysis, youths being male (AOR=0.32, 95%CI=0.20, 0.52, P=0.000) and having their father education were grade level of 5-8 (AOR=0.36, 95%CI=0.24, 0.92) were significantly associated with fewer two or more risk behaviors, while youths living with their cousin were strongly associated with two or more risk behaviors (AOR=28.44, 95%CI=2.01, 40.30) among in-school youths.

Youths having peers pressure to have sex (AOR=0.50, 95%CI=0.26, 0.98, P=0.044) and peers use substance (AOR=0.21, 95%CI=0.12, 0.38, P=0.000) were significantly associated with fewer two or more risk behaviors among in-school youths.

For out-of-school youths, youths who were living with brother/sister (AOR= 6.53, 95%CI, =1.46, 29.07), having their mother education were grade level of 5-8 (AOR=13.28, 95%CI=1.70, 20.36) and 9-10 (AOR=23.29, 95%CI=2.80, 39.54) were significantly associated with one risk behaviors.

Among out-of-school youths having no education (AOR=4.44, 95%CI=1.45, 13.620) and grade level of 9-10 (AOR=3.17, 95%CI=1.52, 6.63) were strongly associated with two or more risk behaviors.

Out-of-school youth who were earn income from parent (AOR=7.06, 95%CI=1.74,14.48), scholarship (AOR=18.87, 95%CI=3.84, 35.48) and relatives (AOR=6.69, 95%CI= 1.54, 12.70) were strongly associated with two or more risk behaviors, while youths having peer pressure to have sex (AOR=0.62, 95%CI=0.41, 0.94, P=0.024), peers being sexually active (AOR=0.59,95%CI=0.38, 0.92, P=0.019) and peers use substance (AOR=0.31, 95%CI=0.20, 0.48, P=0.000) were significantly associated with fewer two or more risk behaviors.

**Table 16 Multivariate analyses of concurrent multiple health risk behaviors among in-school and out-of-school youths by socio demographic Backgrounds and peer influence in Yaballo town, Borana zone, Oromiya, 2011/12.**

Variable	In school		Out of school	
	Adjusted OR 95%CI one risk	Adjusted OR 95%CI Two or more risk	Adj.OR95%CI one risk	Adj.OR95%CI Two risk
<b>Sex</b> Male Female		0.32 (0.20, 0.520)*** 1		
<b>Youth education</b> Illiterate Read and write 1-4 5-8 9-10 11-12 Above 12	6.37 (0.04, 9.22) 1(R)			4.44 (1.45, 13.63)*** 0.26 (0.03, 2.07) 0.34 (0.18, 0.89)* 0.96 (0.49, 1.87) 3.17 (1.52, 6.63)*** 1.65 (0.94, 2.88) 1(R)
<b>Ethnicity</b> Oromo Gurage Amhara Konso Burji Tigre Other		1(R) 8.16 (0.31, 216.27) 1.95 (0.23, 16.99) 3.99 (0.31, 51.73) 0.68 (0.10, 4.68)		1(R) 0.69 (0.09, 5.41) 1.92 (0.25, 14.91) 1.36 (0.17, 11.02) 0.46 (0.06, 3.32) 0.22 (0.02, 2.26) 0.31 (0.04, 2.06)
<b>Father education</b> Illiterate Read and write 1-4 5-8 9-10 11-12 Above 12	4.71 (0.65, 33.75) 0.09 (0.01, 1.61) 1.61 (0.04, 16.41) 4.31 (0.47, 39.06) 2.52 (0.36, 17.75) 1(R)	2.01 (0.82, 4.95) 0.58 (0.19, 1.73) 0.42 (0.15, 1.20) 0.36 (0.24, 0.92)* 1.46 (0.55, 3.87) 1(R)		0.51 (0.13, 1.96) 0.41 (0.08, 2.03) 0.63 (0.16, 2.51) 2.70 (0.09, 1.48) 0.67 (0.17, 2.69) 0.43 (0.07, 2.63) 1(R)
<b>Mother education</b> Illiterate Read and write 1-4 5-8 9-10 Above 12			2.51 (0.48, 12.99) 3.46 (0.09, 13.49) 5.36 (0.56, 11.15) 13.28 (1.70, 20.36)* 23.29(2.80,39.54)** 1(R)	
<b>Income</b> Working Parent Scholarship Relative				1(R) 7.06 (1.74, 14.48)** 18.89 (3.84, 35.48)** 6.69 (1.54, 12.70)***

<b>Living arrangements</b>				
Both parents	1(R)	1(R)	1(R)	
Father only	0.08 (0.00, 2.56)	1.44 (0.14, 14.67)	0.109 (0.01, 13.34)	
Mother only		2.09 (0.16, 26.65)		
Brother/sisters	5.75 (0.20, 16.71)	2.29 (0.25, 20.71)	6.53 (1.46, 29.07)*	
Grand parent		7.64 (2.08, 12.75)		
Cousin		28.44 (2.01, 40.30)**		
Step father/mother		2.10 (0.93, 12.46)		
Alone		1.36 (0.17, 10.88)	2.17 (0.10, 4.50)	
Friends	0.18 (0.01, 5.29)	0.98 (0.12, 8.08)	9.15 (0.63, 13.28)	
<b>Peer pressure to have sex</b>				
Yes		0.50 (0.26, 0.98)*		0.62 (0.41, 0.94)**
No		1		1(R)
<b>Sexually active peers</b>				
Yes		0.57 (0.29, 1.13)		0.59 (0.38, 0.92)**
No		1		1(R)
<b>Peers use substance</b>				
Yes		0.21 (0.12, 0.38)***		0.59 (0.38, 0.92)***
No		1(R)		1(R)

\*p<0.05, \*\*p< 0.01, \*\*\* p < 0.001 significant

## FGD Results

### 1. Why youth exposed to multiple health risk behavior?

According to participants the prominent factor predispose youth to multiple health risk were lack of recreational places (youth center), age, peer influences, poverty, watching pornographic film and living separately from parents (lived alone).

### 2. Which health risk behavior is common in your area? Why?

All group come to consensus of prevailing risk behavior in their areas. The participant prioritized Khat on first rank then alcohol drank, sexual intercourse, drug (shisha), watching pornographic film, boy/girl friend

*Male discussant* said Khat chewing was prevalent in our area “because community or family already participated in this behavior and they took as culture Khat chewing. Then youths learned these bad behaviors from community or family. This means it passed from generation to generation .student in-school Khat chewing because of staying a long period of time and in order to concentrate their study and out-of-school for the sake of waste their time and relaxation because I don’t have work and I don’t have where to go, so I have to lose my time by chewing Khat”.

*But contradict to the above mentioned one female discussant* said “watching pornographic was prevailing in our area due to watched in secret places is not appeared as problem. Because there is strong chain between sex and watching sex film it aggravate youths for sexual intercourse”.

*Female discussant* “said Khat chewing was common in our area next was boy/girl friend. She said if you don’t have boy/girl friend they considered as abnormal, Especial youths come from rural areas if they don’t have friend you were not accounted as human being”.

*Male discussant* said the most common heath risk behavior in our areas were Khat chewing and boy/girl friend. “Now a day boy/girl friend considered as fashion particularly for female if they don’t have friend she considered as inferior than the girls who had friend. The girls who had friend considered as leader, this will reduce the academic achievement of female student”. *Female discussant* claimed that “if they had peers who chew Khat they considered as the sign of clever, but if you have peers who don’t chewed Khat considered as silly (idiot)”.

### **3. What are the problems when youths start sex before marriage?**

Majority of participant reached agreement on why youth start sex before marriage. According to participants the main reason for early sex were peer pressure, watching pornographic films, khat chewing, alcohol, cigarette smoked, drug(shisha),age, environmental influence, and economic problem. Moreover, they indicated that lack of control over and absence of continuous supervision of the parents and the teachers as well will expose the youths to sex.

Most of the participants said female suffered more than male because she influence easily by their peers and male. This will disclose female youths to STIs including HIV/AIDS, unwanted pregnancy, abortion, fistula, physically, dependency (economically), leave school and finally death. Some of the discussant said both gender were suffered equal because they are in fire age and the want to practice new things to see what is looks like.

*One of male discussant suggested “that this is not only the problem of female. It also the problem of male which will exposed youths to HIV/AIDS and STIs, which will be followed by economic, social and psychological problems. He furthermore expressed that, as a result of youth suffering the parents and nation will face inevitably problems”.*

*Male discussant said that" youth practice the first sex for different reasons, these are to test what it looks like, for enjoyment and they are forced by their peers. For females the reason for sexual intercourse was to get money and so that to support themselves or their family economically”.*

According to the participant the remedy for these problems were identify harmful and benefit things ,selecting peer who had good behavior, should be free from community influence, use condom, it should listen family advice, following religion, using ABC method, creating awareness for youths about all these risk behaviors.

*Male discussant said that “in case of in-school youths they should implement what they learned because they have awareness about these problems and he/she should be free from any health risk behaviors”.*

#### **4. Do you think that living arrangement have impact on sexual behavior of youths? Why?**

During focus group discussion, participants universally agreed upon the positive impact of living with parents. When we asked how living arrangements affect sexual behavior of youths, 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. Male discussant said; *“we parents are more matured; we know what is good and bad from experience but the adolescent don’t know, so easily exposed to venereal diseases. Hence a more closely attached adolescent is likely to get good parental guidance that will help him postpone unplanned sexual activity”*.

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 .Female discussant 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. Do you think that youth in-school is different from those youth out-of-school regarding practicing of concurrent risk behaviors? Why?**

During focus group discussion most of participant agreed upon out-of school youths were more practice multiple health risk behavior than in-school youths. The reasons mentioned by the participants were hopeless, lack of education (particularly those below grade 4), lack of awareness, lack of employment, peer influence, environment influence.

*One of male discussant said; “those out-of-schools especial those who complete grade 10 and don’t have work there is a word said by these youths. When you greet them where the educated person achieved I also finished, now I am staying home as materials. Due to this he/she influenced by the idea of their peers then starts to practice these health risk behaviors”*.

#### **6. Is there association between the substance use and sexual intercourse?**

During focus group discussion all participants reached to consensus. They said that youth first chewed Khat with drug (shisha) as well as cigarette for the sake of makes their mind pleasure or free then drink alcohol (for chabsi). After took these all substance the coexistence of these

substance initiate she/he for sexual intercourse. Due to unable to control themselves readily had sex without any methods. This disclose youths to STIs including HIV/AIDS, unwanted pregnancy, abortion, self-insufficiency, death and theft.

*One of female discussant said; “there is strong association between substance use and sex. The consequences of these have impact on mental, social and economy of youths and the community whole”.*

During focus group discussion participants were recommended the following remedy for the problems. These solution were *listening their mother and father advice, identifying harmful and benefit substances, selecting peers who had good behaviors, creating awareness for their parents and youths about health risk behaviors, stop use of substance abuse ,providing limited amount of money to their children(adolescent),particularly female should be care of peers because easily convinced by their peers, following religion, finally the government should take serious measurement on substance abuse and formulated policy, should create job opportunity particularly for out-of-school youths and female commercial sex workers.*

## **Discussion**

This study tried to assess the prevalence of single and concurrent health risk behavior among in-school and out-of-school youths in Yaballo town. Moreover, the study tried to see the association between sexual behavior and health risk behavior with socio-demographic variables such as sex, age, school status, religion, parent's education, living arrangements, etc.

The existence of risky sexual practice including premarital sex, unprotected sexual intercourse with non-marital partners and sexual intercourse with female commercial sex workers and habit of engagement in substance use were reported by both in-school and out-of-school youths.

Overall, among youths 87% (81.9% ISY, 92% OSY) reported having had sex. This shows that many youths were sexual active prior to this study. However, this finding was much higher than the results of previous study conducted by BSS II of HIV/AIDS in Ethiopia 16% 2002, in Nekemte 21.4%, BSS of HIV/AIDS 9.9% 2005, in Bale 31%, single youths in Ethiopia 25% male and 16% female, the study conducted in Addis Ababa 33.5% (18.1% ISY, 46.3% OSY), (35, 36, 39, 44, 41, 49) respectively, but the finding of this study was slightly higher than the study done youths in Ethiopia 82% (23). This huge discrepancy could be due to difference of study participants among different studies. In this study male was sexually active than females. The reasons may be boys may exaggerate and the girls underreport.

This finding show that age, religion, school status, youth education, father education, living arrangements, source of income were associated with ever having sex of youths. This is consistent with the previous study (26, 36, 37, 39, 42, and 45). Being out-of-school youth was associated with sexual experience of youths. The reason for the association could be underlying behavioral problems that predispose youths to leave school and also engaged in risk sexual behavior. Thus, being out-of-school is likely to be just a marker of such underlying behavioral and mental problems.

In this study substance use, peer sexually active, peers use substance and watching pornographic films were associated with ever having sex of youths. As is commonly recognized, youth are influenced by their peers and peers influence teen sexual behavior. Peer pressure and sexual

behavior is another environmental variable that believed to have effect on adolescents' sexual activity. This particular study proved that youths claimed having had peer pressure to engaged in premarital sex were more likely to report sexual activity. This is correspondence with previous studies in many parts of the world (23, 25, 31, 32, 37, 38, 39, 42, and 45). *“During the FGDs the respondents also mentioned that most of the youth involved into sexual practice by the influence of peers, substance abuse and watching pornographic films”.*

Overall, the majority (74.4%) of sexually active youths engaged in sexually active before celebrating their 18<sup>th</sup> birth days. Many study also indicated that secondary school students are becoming sexually active at an increasing earlier age (38- 40). This early initiation of sexually activity prolongs period of exposure to risk of pregnancy and risk of contacting STDs, including HIV infection during the reproductive span.

*“The FGDs participant highly acknowledged that most youth initiated sex before the age of eighteen years; this condition exposed them to unwanted pregnancy and abortion”.*

In generally, among youths ever had sex 44.4% (51.5% ISY, 38.5% OSY) had two to four sexual partners in their life time. This figure is higher than a finding in Nekemte (20.2%) (39), in Agaro 35.6%(43), a study conducted in 2000, to evaluate the impact of a community based adolescent reproductive health problems in Ethiopia (25% males and 10.9% females) (33) and in Addis Ababa 12.8% (10.9% ISY, 46.3% OSY) (49). This may indicate that the risk taking behavior of youths is high, which needs emphasis in changing their sexual behavior.

In this study among sexually active males 22% (13.4% ISY, 29.4% OSY) reported having had sexual intercourse with CSWs. This figure is higher than the study conducted in Nekemte (13.3%) (39), in Bale 20.5% (44), in North West Ethiopia 16.5% (40). This could be due to low awareness of youths about STIs including HIV/AIDS.

Overall, among sexually active youths 37.8 % (37.6% ISY, 38% OSY) had not used condom during the last sexual intercourse. This figure is high when compared to study conducted in Ethiopia (1.4% ISY, 20% OSY) (23), in USA 38.9% (24), in Addis Ababa 47% (50% ISY, 48.6% OSY) (49), in Bale 58.1% (44), in Thailand (16% male, 11% female) (27). This signifies that the extent of exposure of youths to HIV/AIDS, STIs, unwanted pregnancy, abortion and dropout

school is high due to their engagement in unprotected sexual practice. This could be due to the fact that lack of information about sexuality and reproductive health has got an impact on condom use. This finding indicates that majority of out-of-school youth were at increased risk of HIV/AIDS because they were not using condom consistently or they were not abstaining from sex.

This finding shows that sex, religion, living arrangements and source income of youths were associated with unprotected sex among socio-demographic characteristics. In this study the association between male sex and unprotected sex was significant. The reasons could be hormonal factors might be expected to increase impulsiveness and risk taking behavior in males; the association with male sex may also be mediated through other intermediate behaviors such as alcohol use. In male attendees at sexually transmitted disease clinics in southern Vietnam, being aged fewer than 20, not married, not having a current girl friend, using alcohol before sex and substance use were all factors independently associated with visiting a female sex worker (50). Similarly in Colombia, a longitudinal survey revealed that adolescents with increased drug use were more likely to engage in unprotected sex as well as multiple partnerships(51).

In this finding, Khat chewing, had sex before 15 years, peer pressure to had sex, peer sexually active and watching pornographic film were associated with unprotected sex of youths. This is concurred with the study conducted in Ethiopia (23).

Overall, the most common single health risk behaviors of youth's in-school and out-of-school were being sexually active 79.5% (84.5% ISY, 75.5%), watched sex films 71.8% (69.7% ISY, 73.8% OSY), Khat chewed 63.6% (58.1% ISY, 68.6% OSY), had two or more sexual partner 54.9% (65.7% ISY, 46.6% OSY), Alcohol drank 40.7% (38% ISY, 43.4% OSY) , had sex before 15years 30.1% (23.8% ISY, 36.2% OSY), drug took 23.3% (16.4% ISY, 30% OSY) and smoked cigarette 22.8% (19.4% ISY, 26.2% OSY).This figure is higher than the BSS II conducted in Ethiopia drug took (9.7% ISY, 28.5% OSY), Alcohol drank( 9% ISY, 29.1% OSY) and sexually active (16% ISY, 49% OSY) ,but Khat chewed (69.9% ISY, 82.1% OSY) was higher than this study(35).The finding of this study is much higher than study conducted in Ethiopia Khat chewed ( 23% OSY ,13% ISY), substance use other than Khat chewing ( 0.7%

ISY, 5.1% OSY)(23), in USA cigarette 19.5%, current sexually active 34.2%, 38.9% not using condoms at last sexual intercourse and drug 2.1% (24). This indicate that majority of youths engaged in multiple health risk behavior, which was predispose youth to involved in sexual activity and unprotected sex and consequently acquiring STIs including HIV/AIDS , unwanted pregnancy, abortion and theft. This could be due to Ethiopia's increased openness to Western culture has resulted in the influx of pornographic videos, books, and magazines, whose consumers are mostly young people. Western pornography often preceded sexual initiation and helped the couple to "loosen up" a bit.

But contradict to the above our finding is less than the study conducted in Uganda alcohol 64% and drug 68 % (30). One encouraging finding is that lesser proportion of alcohol drinks among out-of-school youths 43.4% in this particular study than study done in south Gonder 66.5%(52).

Early age at first sexual intercourse (before15 year) and being sexually active was higher among youths in this study. Sexual experience and age at first intercourse are critical indicators of the risk of pregnancy and sexually transmitted diseases including HIV/AIDS. The alarming rate of sexual risk behaviors among the younger adolescents may be explained by their curiosity, experimentation with new things, environmental influences, peer influences and hormonal change. Research suggests that early sexual intercourse is associated with sexually transmitted infections including HIV/AIDS and early pregnancy, which might result in abortion and immature childbirth (53) .

This study demonstrated that coexisting of health risk behavior of youths. Overall, out of health risk behaviors of youths the most common concurrent health risk behavior of youths were Khat chewing and sexual active 39.6% (39.6% ISY, 39.6% OSY), sexual active and not using condoms 26% (27% ISY, 25.3% OSY), sexual active and first sex before 15 year 9.8% (13.5% ISY, 7.1% OSY) and 5.7% (3.6% ISY, 7.1% OSY). This may be due to the curiosity of the youngsters to explore new experiences and their vulnerability to them. This highlights the importance of youth preventive services encompassing all health risk behaviors.

Another important finding is the sex difference for risk factors for multiple HRBs. Boys seemed to be more likely than girls to engage in multiple risk behaviors. This might be due to cultural acceptance for young boys to engage in Khat use, alcohol use, smoking, and sexual activity. The alternative reason is social desirability reporting bias in which boys may exaggerate and girls underreport their multiple health risk behaviors. Previous studies in China (26) show similar results with male students being more likely to report engaging in multiple risk behaviors than female students.

Out-of-school adolescents belong to a vulnerable group for risk-taking and they are at higher risk of engaging in multiple health risks. The reason might be that they are more relaxed to socialize with many people compared to in-school youth who have more strict rules to observe. Similar results have been found in the United States, Ethiopia, and China (16, 23, 26).

Peer involvement in health risk behaviors seemed associated to adolescents' multiple health risk behaviors. Jessor suggested that adolescents who are more connected with their peers than with their parents, especially peers with negative behaviors, were more likely to practice risky health-related behaviors (9). In our study, peer behavior was associated with health risk behaviors among the participants such as substance use and sexual activity, which is correspondence with previous studies in other parts of the world (22, 27 ,(54))

### **Strengths of the study**

- This study has tried to compare health risk behaviors among in-school and out-of-school youths and identifying factors for risk behaviors of youths.
- To my knowledge this is the first study investigating prevalence of concurrent HRBs among youths in Ethiopia.
- Moreover, the use of combining quantitative and qualitative data has assisted us to collect more information that provides insight into the complex pattern of risk behaviors.
- This study was community based study for out of school youth.
- The response rate is high.

### **Limitations of the study**

This study has some limitations that are worth mentioning. This investigation is a cross-sectional study and thus it is not possible to determine either causality or directionality of any health risk behaviors. Since we rely on self-reporting a potential bias caused by the sensitive nature of some health risk behaviors is possible. Some behaviors might thus be over reported by boys and under-reported by girls. Moreover the data are retrospective, thus are subjected to recall bias.

## **Conclusion**

This study indicates that a substantial proportion of youths were sexually active.

Youths were involving in high risk behavior that could disclose them to STIs including HIV/AIDS. These are early sexual debut, unprotected sex with commercial sex workers (non-use of condom), having multiple sexual partners.

Age, school status, parental education, living arrangements and source of income were associated with engagement of youths in sexual activity.

Substance use, peer sexually active, peers use substance and watching pornographic film were significantly associated with sexually activity of youths

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

Khat chewing is the only substance use strongly associated with unprotected sex.

Sexual active and watching pornographic were the most common single health risk behaviors both in-school and out-of-school youths.

The most common concurrent risk behaviors among in-school youths were Khat chewing and being sexually active, followed by being sexually active and not using condoms and being sexually active and having first sex before 15 years, while Khat chewing and being sexually active, being sexually active and not using condoms and alcohol use and being sexually active were the most common concurrent risk factors for out-of-school youths.

The influencing factors on Multiple HRBs are parent's education, youth education, living arrangements, source of income and peer influences.

## Recommendations

- Majority of youths engaged in health risk behaviors. Particularly out-of-school youths are found to be increasing in risk behaviors, thus it is essential to reach young people before they engaged in high risk behaviors such as Khat chewing, alcohol drinking, cigarette smoking, sexually activity and other related factors to save them from being disclose to STIs including HIV/AIDS.
- In this study peer behavior is found to have a strong influence on sexual experience of youths and risk behaviors of youths. It is likely, therefore, to bring healthy sexual behavior and risk behaviors through peer education by properly trained peer educators. Peer education could help to establish standards for acceptable behavior, and will change norms that encourage risky behavior. The government and NGOs should encourage capacity of peer educators in terms of materials and training.
- Strategies might be to encourage young people to finish school, be selective in choosing their friends, and aimed for health attitudes and behavior.
- They government should Create job opportunity for out-of-school youth, promote their participation and equip them with life skills to put knowledge in to practice.
- Substance uses were strongly associated with sexual activity of youths. So that HIV/AIDS prevention and control programmers targeting youths, should take into account this demonstrated association of risky sexual behavior with use of substance, given its widespread use among in-school and out-of-school youths, and formulate appropriate interventions to limit its use.
- Increase public awareness about potential health detrimental of substance use and sexual activity.
- The support of religious institutions should be sought in providing education aimed at preventing substance use and sexual activity.
- The government and NGOs should formulate prevention services that encompassing all heath risk behaviors.
- Further research is needed to explore in depth factors influencing youth health risk behaviors and what programs are most effective and efficient in addressing multiple risk behaviors among youths.

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**Annexes-A**

**QUESTIONNAIRE**

**Questionnaire on concurrent multiple health risk behaviors among youth in Yaballo town**

**Confidentiality and information format sheet**

Dear respondent,

Hello, my name is \_\_\_\_\_. I am working in a research team of Addis Ababa University.

I am interested in learning more about concurrent multiple health risk behaviors among youth in your area. These questionnaires designed for a research work which will be approved by AAU, college of health science, school of public health to be conducted in partial fulfillment of masters' degree in public health. We hope you will help us by answering these questions. None of your answers will be available to anyone .Do not write your name .All the information you give us will be kept private. Anyone who will not be willing to Participate in the study will have the right to discontinue at any time in the process.

Confidentiality and privacy will be maintained by ensuring the respondents answering.

The questions will be placed on a separate place where no one can see them. Therefore, we really need your honest and genuine response to questions prepared is highly appreciated and helpful to attain the objective of the study. The results of the study will hopefully serve as an important input for policy and intervention programs that aim at addressing youth multiple heath risk behaviors.

We thank you in advance for taking your time to answer our questions.

Would you be willing to participate in the study?

If yes, proceed to the next page

If no, please stop here

Thank you

**Consent**

I the undersigned have been informed that the purpose of this particular research Project is concurrent multiple health risk behaviors among youth. I have been informed that I am going to respond to these questions by answering what I know .I have been informed that the information I give will be used only for the purpose of finding out problems of youth health risk behaviors. The information I give will be treated confidentially. I have also been informed that I can refuse to participate in the study or not to respond partial or the whole questions I am not interested. Furthermore I have been informed that I can stop responding to the questions at any time in the process. Based on the above information I agree to participate in the research voluntarily with the hope of contributing (on behalf of one) to the effort of knowing the concurrent multiple health risk behaviors among youth in Yaballo town.

Signature \_\_\_\_\_

Date \_\_\_\_\_ Total time taken \_\_\_\_\_

Identification Number

001 Kebele \_\_\_\_\_

002 Ketena \_\_\_\_\_

04 House Number \_\_\_\_\_

005 Code Number \_\_\_\_\_

006 Date of interview \_\_\_\_\_

007 Interviewer name \_\_\_\_\_

008 Supervisors \_\_\_\_\_

Please circle all the possible answer for those have choices and for the other write on the space provided.

**Part I Socio-demographic variable**

Code number and Question	Response
101.sex of respondent	1.male 2.female
102. age of respondent(write in space provided No	_____age
103.What is your religion	1-Orthodox 2-Catholic 3-Muslim 4-Protestant 5.wakefata 6-No religion 89.Other specify
104.what is your ethnicity	1.Oromo 2.Gurage 3.Amhara 4.Tigre 5.Konso 6. Burgi 89. Other specify_____
105.Attending school of respondent	1. in-school 2.out of school
106. If the respondent attending school, what is the highest level of education you completed?	0-No education 1-Read and write 2-Grade 1 to 6 3-Grade 7 to 8 4-Grade 9 to 10 5-grade 11to12 6-Above grade 12
107.what is your father highest level of completed education	0-No education 1-Read and write 2-Grade 1 to 6 3-Grade 7 to 8 4-Grade 9 to 12 5-Above grade 12
108. What is your mother highest level of completed education?	0-No education 1-Read and write 2-Grade 1 to 6 3-Grade 7 to 8 4-Grade 9 to 12 5-Above grade 12
109 .with whom do you live now?	1. I live with both of my parents 2. I live with my mother only 3. I live with my father only 4. I live with brothers/sisters 5. I live with grandparents 6. I live with cousins 7. I live with a stepfather or stepmother 8. I live with my friends 9 I live alone 89.Other specify_____

110. What is your source of income?	1. working 2. parents 3. scholarship 4. relative 89. Other specify
111. What is your family current marital status?	1. living together 2. divorced 3. separated 4. widowed 89. Other specify ____

## PART II SEXUALBEHAVIUR AND PRACTICE

201. Have you ever had sexual intercourse?	1. yes                      2. no
202. If yes, how old were you when you first had sexual intercourse?	_____ age    88. Dk
203. How old was the person with whom you first played sex?	_____ age    88. DK
204. Think of the last person you had sex with in the last three months. How would you describe this person?	1. Husband                                      4. Teacher 2. Boy/girlfriend                              5 Stranger    3. Family member 89. Other person (specify)
205. When you played sex the first time, had you/your partner consumed any alcohol or used 'khat', Or any other drug beforehand?	1 yes 2. No. 88. Don't know 99. no response
206. Thinking back over your lifetime until now, with how many people have you ever Played sex?	_____ number partner 88. DK
207. In the past three months, have you had sexual intercourse with anyone?	1. YES    2. no                      88. don't know 99. No response
208. With how many persons have you had sexual intercourse in the past three months?	_____ number 88. Don't know 99. No response
209. The first time you had sex before marriage; did you or your partner use any contraceptives?	1. Yes                                      2. No 88. Don't know 99. No response
210. What method did you use at the first sexual intercourse?	1. Condom                                      4. Withdrawal 2. Pills    5. Foam (tablets, aerosol) 3. Rhythm    89. Other (specify)
211. The last time you had sex with your partner; did you or your partner use any Contraceptives?	1. Yes    2. No 88. Don't know 99. No response
212. What method did you use at the last sexual intercourse?	1. Condom                                      4. Withdrawal 2. Pills    5. Foam (tablets, aerosol) __ 3. Rhythm    89. other(specify)-----
213. Are you currently using any method to prevent AIDS or STDs?	1. Yes                                      2. No
214. Which method or methods are you currently using to prevent AIDS or STDs?	1. Condoms                                      88. Don't know 2. Abstinence                                      89. Other(specify) 3. Faithful one-to-one relationship
215. How often do you use a condom with your partner?	1. Sometimes                                      3. Always 2. Most of the time                                      88. Don't know
216. [For males only] Have you ever had sexual intercourse with a female commercial sex worker?	1. Yes                                      2. No
217. If the answer is yes, how often did you use condom?	1. Not at all                                      4. Always 2. Sometimes                                      88. Don't know 3. Most of the time                                      99. no response

**PART III SINGLE HEALTH RISK BEHAVIOR**

301. Have you tried Khat chewing in the previous month?	1. Yes 2. No 88. Don't know 99.no response
302.If yes, How often did you chew Khat in the previous months	1-Every day 2-Every two days 3-Every week 4-Every month 5-Occasionally 99-No response
303. How do you feel about your sexual desire, after you chewed Khat?	1-Increase than the usual 2- I do have les feeling 3- No difference than usual 88- I don't know 99- No response 89- Other specify _____
304. Have you tried to drink alcohols in the previous month?	1. Yes 2. No 88. Don't know 99.no response
305.If yes, How often did you drink alcohol in the previous months	1-Every day 2-Every two days 3-Every week 4-Every month 5-Occasionally 99-No response
306. How do you feel about your sexual desire, after you drink Alcohols?	1-Increase than the usual 2- I do have les feeling 3- No difference than usual 88- I don't know 99- No response 89- Other specify
307. Have you tried smoked cigarette in the previous month?	1. Yes 2. No 88. Don't know 99.no response
308. If yes, How often did you have smoked cigarette in the previous month?	1-Every day 2-Every two days 3-Every week 4-Every month 5-Occasionally 88.DK 99-No response
309. Have you taken amphetamine tablet (drug) in the past 30 days prior to the survey?	1. Yes 2. No 88. Don't know 99.no response

310.If yes, how often did you took drug in the past 30days prior to survey	1-Every day 2-Every two days 3-Every week 4-Every month 5-Occasionally 88- DK      99-No response
311. Do these drinks and drugs increase your sexual desire?	1. Yes      2. No 88.don't know    99.no response
312. Have you had sexual intercourse before six months?	1.Yes                      2.no 88.DK                      99.no response
313. Have had sexual intercourse before age of 15 years?	1.Yes                      2.no
312. Have you had two or more sexual partners during six months?	1.yes                      2.no
314. Have you not used condom during the last sexual inter course?	1.yes                      2.no

**PART IV Peer influence**

401. Do your peers encourage you to have sexual intercourse?	1- Yes    2- No    88-Don't know    99- No response
402. Are your peers sexually active?	1- Yes    2- No    88-Don't know    99- No response
403. Do your peers use alcohol, chew Khat or use drugs?	1- Yes    2- No    88-Don't know    99- No response
404. Do you have sexual partner (Boyfriend or Girl friend)?	-Yes    2- No    88-Don't know    99- No response
405. How many partners do you have?	1-One    2-Two    3-More than two 88.DK    99- No response
406. Do you communicate on issues of safe sexual relationship with your sexual partner?	- Yes    2- No    88-Don't know    99 - No response
407. Do you know of any sexual intercourse with prostitutes among your male close friends?	1-Yes                      2.no                      88.Don't know                      99-no response
408. Have you your friend had become pregnant?	1-yes                      2. No                      88.don't know 99.-no response

**PART V Co-occurrence of multiple health risk behaviors**

If the respondent exposed to more than one health risk behavior and the classification of risks as below and the risk behaviors of the youths tend to fall into specific patterns.

501.If the respondent not have risk	no risk
502. If the respondent have one health risk behavior. Choose one of them	1.khat chewing 2.alcohol use 3. current smoking 4.currently sexual active 5.having first sexual intercourse before 15 years 6. Not using condoms during last intercourse
503.If the youth have two health risk behaviors, choose one of them	1.khat and Alcohol drinking 2,khat and smoking 3.khat and sexual active 4.khat and first sex before 15 year age

	5.khat and not using condom 6.alcohol and smoking 7.alcohol and sexual active 8.alcohol and first sex before 15 years age 9.alcohol and not using condom 10.smoking and sexual active 11.smoking and sex before 15 year 12.smoking and not using condom 13.sexual active and first sex before 15 year 14. sexual active and not using condom
504. If the respondents have three health risk behaviors, choose one of them.	1.khat,alcohol and smoking 2.khat,alcohol drinking and sexual active 3.khat,alcohol and first sex before 15 year 4. Khat, alcohol and not using condom 5.sexual active, sex before 15 year and not using condom
505. If the youth have four health risk behaviors, choose one of them	1.khat,alcohol,smoking and sexual active 2.khat,alcohol,,sexual active and first sex before 15 year 3.alcohol.smoking,sexual active and not using condom
506. If the youth have five or six health risk behavior	1.khat,acohol,smoking,sexual active, sex before 15 year age and not using condom

## Annex -II

### Focus group discussion

#### A study on concurrent multiple health risk behaviors among youth in Yaballo town

Name of moderator\_\_\_\_\_

Name of Rap-porter\_\_\_\_\_

Date\_\_\_\_\_ Total Time taken\_\_\_\_\_ minutes

Code no. of tape record\_\_\_\_\_

1. Why youth are exposed to multiple health risk behaviors?
2. Which risk health behavior is common in your area? Why?
3. Do you think problems associated with sexual characteristic are a major health problem of youth or not? Why? How? Let discuss.

Probe; what are they?

Probe; who is most likely to suffer (age, sex, behavior)?

Probe; what do you think the solution?

4. Do you think that living arrangement of youth have impact on their sexual risk behavior? Why? And Why not?

5. Do you think that youth in-school is different from those youth out-of-school regarding practicing of concurrent risk behaviors? Why? And why not?

6. Do you think majority of youth currently use substances concurrent? Why?

Probe: which of the substances most used here? Why?

Probe: to discuss on the association between the substance and risk reproductive behaviors.

Probe: their sexual filling when used the substance, even to give examples.

Probe: is it not possible to stop using? Why?

**Kuutaa gaaffillee Afaan Oroomo**

**Univarsitti finfinnetti**

**Coollege saayinsii fayyaa**

**Mana barumsa fayyaa hawaasa**

Gaaffilee wa'ee amaloota walqabaatani/waliin ta'ani fayyuma dargagoota irrati midhaa fidan akkamitti hambissina kan umriin isaan wagga 15-24 ta'an maagala yaballoo keessa jiratan.

Gaaffilee filannoo addadda qaban maamiloota ittiin gaafachuudhaaf qophaa'e:

**Irratti hundeeffama gaafatootaaf qophaa'e(uunka wali galtee)**

Itti lixa uunka walii galtee/fudhachuu itti hirmaata qorannoo utuu gaaffii hineegalin

Dubbisuu/nagaa gaafachuu

Akkami?,Maaqan koo-----Ani garee qoranno gaggessan univarsiitti finfinne keessa hojjadha.Waanti ani baruu barbadee amaloota walqabaatani fayyuma dargagoota irrati midhaa fidan akkamitti hambissina kan umriin isaan wagga 15-24 ta'an maagala yaballoo keessa jiratan. Qorrannon kuni rakkoo dargagoota furuuf gahee gudda qaba.Gaaffin kuni kani karoofameef qoranno wa'ee amaloota wajjiin deeman kan dargaggoonni shakaalan saana furmaata itti keenuf Akka deebi nuuf keenitu abdi qabna.

Deebin atii nuuf kennite namni tokkolle hin arguu.maaqa kee hin barressin.oddeffannoo sirra fudhane akka iccittitti qabna. Deebiin atii nuuf kennitu baay'ee barbachisaa kayyon keenya galmaan gahuuf,akkasumas amaloota bada akkasii kaana ballessuf fi immamata keessa galchuuf.

Duraatu sii galateefana yeroo kee fudhatee deebii nuu keenu keetif

Fedhii itti hirmaachuu qabdaa?

Eyye,gara fuula itti aanuu

Lakki,achumaatti dhabii

Galatoomi

**Walii galtee**

Kayyoo qorannoo kana siirritti hubadhee jiraa.sirritti naa beeksiisan jiran waan beeku akka deebisuuf fedhi qaba.Qorannon kuni rakkoo dargaggota furuuf barbaachisaa ta'uu isaa hubadhe jiraa kanaaf haama beeku deebisuuf itti hirmachuuf fedhin qaba.

Mallatoo-----

Guyya-----

001 Lakkofsa Eenyuma----- 004lakkofsa mana-----

002 Ganda----- 005 lakkofasa koodii-----

003 Goxii----- 006 guyyaa gaffii fi deebii-----

gafate----- 008 To'ataa

007 Nama gaffi

**Qajeelcha waligala**

**Gaaffillee filaanoo qabanif filaadhu, kan filaate irrati maari fi kan bakki kennamef baaka duwwa saani keessatti barreessi.**

**Kutaa 1<sup>ffaa</sup> wa'ee jreenyaafi dhimoota isaan ilaalatu**

SNo	Gaffiilee	Deebii fi lakkofsa koodii
101	Saala gafaatama	1.dhira 2.dubartii
102	umrii gafaatama(lakkofsan barreessi bakka kennameti	-----umrii
103	Amantiin kee maali?	1.ortodoksii 2.katoliki 3.Muusileemii 4.prootestantii 5.Waaqefata 5.Hinqabu 89.kan biraa (addan baasii)_____

104	Qomoon /sanyiin/ kee maali?	1.Oroomo 2.Guragee 3.Amhaara 4.Tigree 5.Konso 6.Burji 89. kan bira(addan baasi)_____
105	Haala barrumsa gaafatama	1.Mana baruumsaa keessa 2.mana baarumsaan alaa
106	Yoo gaafataman mana baruumsa keessa jira ta'ee baruumsi olaanan baratee meeqa?	0-baruumsa hin qabu 1-barresuufi dubbisuu 2-kutaa 1- 4 3-kutaa 5-8 4-kutaa 9-10 5-kutaa 11-12 6-kutaa 12 olii
107	Baruumsii olaanan abbaan kee xumuree meeqa?	0-baruumsa hin qabu 1-barresuufi dubbisuu 2-kutaa 1- 4 3-kutaa 5-8 4-kutaa 9-10 5-kutaa 11-12 6-kutaa 12 olii
108	Baruumsii olaanan haadhi kee xumurtee meeqa?	0-baruumsa hin qabu 1-barresuufi dubbisuu 2-kutaa 1- 4 3-kutaa 5-8 4-kutaa 9-10 5-kutaa 11-12 6-kutaa 12 olii
109	Amma enyu wajjin jiraacha jirta?	1-maatii wajjin 2-haadha qofaa wajjin 3-abba qofaa wajjin 4-obbollessafi obbolletti wajjin 5-akaakuu wajjin 6-adada wajjin 7 -haadha biddenaykn abba budeena wajjin 8-hirriya wajjin 9-kopha jiraadha 89-kan biraa(addan baasi)-----
110	gaalin kee maddi isaa maali?	1-hojjachun 2-maatii 3-gargarsaan 4-firaa

**Kutaa 2<sup>naa</sup> shaakala fi amaloota walqunnamtii saala dargagoota**

201	Wal-qunnamtii saala dhageetee beekta?	1.Eeyye      2.lakki/iyyo
202	Yoo eeyye ta'ee umriin kee yerroo walqunnamtii saala jalqaba gootu meeqa?	-----umrii      88.hin beeku
203	Namni ati walqunnamti saala yeroo jalqaba wajjiin goote umriin isaa meeqa?	-----umrii      88.hin beeku
204	Itti yaadi naama dhumaa kan walqunnamtii saala wajjin goote ji'aa darbee sadan.akkamitti ibsuu dandaeta?	1.abba warra 2-hirriya dhira/dhaala 3-miseensa maati 4- baarsiisaa 5-keessuma/hin beekkamu 89- kan biraa (addan baasi)-----
205	Yeroo wal-qunnamti saala jalqaba gootan,atii/hirriyaa kee dhugaatii/jimmaykn qorricha biraa fayyadamtan?	1.Eeyye 2.lakki/iyyo 88-hin beeku 99-deebi hin keeniine

206	Gara boodatti deebi'ii jireenya kee keessatti, hanga ammatti,naama meeqa wajjin wal-qunnamtii saala gotee?	-----lakkofsan 88.hin beeku
207	Ji'a darbee saadan keessatti wal-qunnamtii saala nama kammiyu wajjin goote?	1.Eeyye 2.lakki/iyyoo 88-hin beeku 99.deebin hin jiru
208	Naama meeqa wajjin wal-qunnamtii saala gootee ji'aa darbee saadan keessatti?	-----lakkofsan 88.hin beeku 99.deebin hin keenine
209	Yeroo jalqaba wal-qunnamtii saala gootanu,atii yookin hirriyan kee maala ittisaa daa'umsaa tokkolee faayyadamtan?	1-Eeyye 2-lakki/iyyoo 88.hin beeku 99-deebi hin keenine
210	Yoo eeyye ta'e ,maala kamin fayyadamtee walqunnamti saala yeroo jalqabaaf?	1-kondoomi 2-kiniina da'umsa ittisu fayyadamne 3-malacalandarettifayyadamne(rhythm) 4-keessa baasan jigsuu (withdrawl) 5-waanakka sponji (foam) 89-kan biraa(addaan baasi)----
211.	Yeroo darbee yoo wal-qunnamtii saala hirriya kee wajjin gootu,atii yookin hirriyaan kee mala ittisaa da'umsaa fayyadamtan?	1-Eeyye 2-Lakki/iyyoo 88-hin beeku 99-deebin hin keenine
212	Yoo eeyye ta'e,mala kammitti fayyadamtee wal-qunnamtii yeroo darbe?	1-kondoomi 2- kiniina da'umsa ittisu(piillsi) 3-mala calandaretti fayyadamne(rhythm) 4- keessa basan jigsuu(withdrawl) 5-foam(tablet,aerosol) wanta akka spoonji kan sanyii korma ajjessu 89-kan biraa(addaan baasi)
213	AIDS/HIV ittisuuf yeroo amma mala tokkoleetti fayyadama jirta?	1-Eeyye 2-Lakki/iyyoo
214	Mala yookin maloota kamitti fayyadama jirta yeroo amma AIDS/HIV ittisuuf?	1-koondoomi 2-wal-qunnamtii saala goochuu dhiisu 3-tokkofitokkon murta'u 88-hin beeku 89-kani biraa(addaan baasi)-----
215	Kondoomi haamami/meeqa fayyadamta hirriya kee wajjin?	1-yeroo tokko tokko 2-yeroo baay'ee 3-yeroo hundaa 88-hin beeku
216	[dhiira qofaf],walqunnamti saala dubartii manabuna keesa hojjatan wajjin gootee beekta?	1.Eeyye 2.lakki/iyyoo
217	Deebin kee eeyye yoo ta'ee, hamami/meeqa fayyadamte koondoomii?	1.huunda miti 2.yeroo tokko tokko 3.yeroo baay'ee 4.Yeroo hundaa 88.hin beeku 99.deebi hin keenine

**Kutaa 3<sup>faa</sup> amaala qenxee fayyaa dargagoota irratti midhaa fidaan**

301	Ji'aa 3n darbee keessa jimaa qama'uf yaalteraa?	1.Eeyye 2.lakki/iyyoo
302	Yoo eeyye ta'ee,haamam qaama'uuf yaltee?	1-guyya hundaa 2.guyya lama yeroo hudaa 3-torbii huundaa 4.ji'aa huunda 5.yeroo tokko tokko 6. Deebi hin keenine
303	Erga jimma qaamateen booda miiri kankee fedhii saala qunnamtii qabuf akkami?	1-kan duura irra ni dabala 2. Miira xiqqa qaba 3.kan duraa irraa garagaruuma hin qabu 88.hin beeku 99.deebi hin keenine
304	Ji'aa 3n duraa keessatti dhugaati dhuuguf yalteera?	1.Eeyye 2.lakki
305	Yoo eeyye ta'ee ,hamma dhugdee?	1-guyya hundaa 2.guyya lama yeroo hudaa 3-torbii huundaa 4.ji'aa huunda 5.yeroo tokko tokko 6. Deebi hin keenine
306	Erga dhugdeen booda miira kankee fedhii saala qunnamtii qabuf akkami?	1-kan duura irra ni dabala 2. Miira xiqqa qaba3.kan duraa irraa garagaruuma hin qabu 88.hin beeku 99.deebi hin keenine
307	Ji'aa 3n duraa keessatti tamboo xuxuuf yalteera?	1. Eeyye 2. Lakki
308	Yoo eeyye ta'ee,hamam xuuxee?	1-guyya hundaa 2.guyya lama yeroo hudaa 3-torbii huundaa 4.ji'aa huunda 5.yeroo tokko tokko 6. Deebi

		hin keenine
309	Ji'a 3n darban qoranno dhan duraatti qoriicha naama haadochi fuudhateera?	1. Eeyye 2. Lakki
310	Yoo eyee ta'ee ,haamami fuudhate?	1-guyya hundaa 2.guyya lama yeroo hudaa 3-torbii huundaa 4.ji'aa huunda 5.yeroo tokko tokko 6. Deebi hin keenine
311.	Dhugatiifi qoricha fudhaachuun fedhii saala dabaluu ni danda'aa?	1. Eeyye 2. Lakki/iyyoo
312	Wali-qunnamtii saala goote beekta ji'aa 6 n duratti?	1. Eeyye 2. Lakki/iyyoo
313	Wal-qunnamti saala umrii 15nin duraatii goote beekta?	1. Eeyye 2. Lakk/iyyoo
314	Ji'aa 6 keessatti wal qunnamtii saala hirriya 2 fi isaa olii gooteera?	1. Eeyye 2. Lakki/iyyoo
315	Wal-qunnamiti saala darbe kondoomin fayyadamtee?	1. Eeyye 2. Lakki/iyyoo
316	Film wa'ee walqunnamtii saala YKN gazexa wa'ee walqunnamtii saala irratti xiyyefatu ilaalte beekta?	1.Eeyye 2.Lakkii/iyyoo
317	Yoo eyee ta'ee hamam ilaalta?	1.yeroo baay'ee 2.darbe darbe 3.yeroo hundaa

**Kuta 4<sup>ffaa</sup> dhiibba hirriyaa**

401	Hirriyaan kee akka qunnamtii saala gootu sii jajjabbessitera/ssera?	1. Eeyye 2. Lakki/iyyoo
402	Hirriyaan kee wal qunnamtii saala ni godha/cimaadha?	1. Eeyye 2. Lakki/iyyoo
403	Hirriyan kee dhugaati,jimma ,yookin qoriicha ni fayyadama?	
404	Hirriyaa wal qunnamtii saala ni qabda(hirriya dubra yoking hirriya dhiira)?	1. Eeyye 2. Lakki/iyyoo
405	Hirriya meeqa qabda?	1-tokko 2-lama 3-lama olii 88.hin beeku
406	Wa'ee of eeganno wal qunnamtii saala irrati hirriyaa kee wajjin wali maarii'atee beekta?	1. Eeyye 2. Lakki/iyyoo
407	Hirriyaa dhira qabduu keessa nama wal qunnamti saala dubartoota mana buna keesa hojjatan wajjin godhee ni beekta?	1. Eeyye 2. Lakki/iyyoo
408	Hirriyaan kee ulfoofte beekti/beekta?	1. Eeyye 2. Lakki/iyyoo
409	Hirriyaan kee nama biraa akka inni ulfa'uu sababa ta'ee/tattee jiraa/jirtii?	1. Eeyye 2. Lakki/iyyoo

**Kutaa 5<sup>ffaa</sup> amaloota midha fayya irratti fidan waliin argaama/jiraatan baay'innaa isaan.**

Dargagooni amaloota garagara yeroo agarsiisan wanta hedduf saxilamu ni danda'uu kanaaf haala akka kana gaditti qoqodamu

501.	Yoo gaafatamn araada hin qabne	Hin qabu
502.	Yoo gaafataman arada tokko qabatee.kannen armaan gadii keessa tokko filaadhu	1.jimmaa qaama'u 2.dhugatii fayyadamu 3.yeroo amma kan xuxu 4.yeroo amma wal qunnamtii saala goodhu 5.umrii 15nin duratii walqunnamtii saala godhu 6.wal qunnamti yeroo darbe kondoomi fayyadamu dhaabu
503.	Yoo dargagoonin amala arada lama qabaate.tokko keessa filaadhu	1.jimma fi dhugaati dhugu 2.jimmafi tamboo xuuxu 3.jimmafi wal qunnamti saala 4.jimma fi umrii 15nin duratti wal qunnamti saala 5.jimma fi kondoomi fayyadamu dhiisu 6.dhugatti fi tamboo 7.dhugaatii fi walqunnamtii saala 8.dhugaatii fi umrii 15nin duratti wal qunnamti saala 9.dhugaatiifi fi kondoomi fayyadamu dhiisu 10.tamboo fi wal qunnamti saala godhu 11.tamboo fi umrii 15 nin duratti walqunnamti saala godhu 12.tamboo fi kondoomi fayyadamu dhiisu 13.wal qunnamti saala fi umrii 15 ninduratti 14.walqunnamti saala fi kondoomi fayyadamu dhiisu
504	Yoo dargagooni amaloota araada sadii qabatee ,tokko keessa filaadhu	1.jimma,dhugaatiifarsuu 2.jimma,dhugaatiifi wal qunnamtii saala 3.jimma,dhugaatiifi umrii 15nin duratti wal qunnamti saala godhu 4.jimma,dhugaatiifi kondoomi fayyadamu dhiisu 5.walqunnamti saala godhu,umrii 15 nin duraatti qunnamti saala fi kondoomi fayyadamu dhiisu
505	Yoo dargagooni amaloota araada afurri qabatee ,tokko filaadhu.	1.Jimma,dhugaati,aarsuu,fi wal qunnamti saala godhu 2.jimma,dhugaati,wal qunnamti saala fi umrii 15 nin duratti wal qunnamti saala godhu 3.dhugaati,aarsuu,walqunnamti saala fikondoomi saala fayyadamu dhiisu
505	Yoo dargagooni amaloota araada 5ykn 6 qabatee	Jimma,dhugaati,aarsu,walqunnamti saala,umrii 15 nin duratti fi kondoomi fayyadamu dhiisu.

**Keeyyata 2<sup>ffaa</sup> hundeeffama maree kurfee wajjin**

## Yeroon dhufu keessan isaan galatteffana

Akkami oltan/bultaan? Maaqan koo-----hirriyan koo-----kan nuu dhuufne qajeelcha eegumsa fayyaa goodina boorana irratti.kaneen armaan gaditti jiran dubbisuf.

Itti seena xiqqon booda wa'ee dargagooni amaloota adda addaa yeroo tokkotti saxila bahanif irratti wal hasoofna.

Naanno keetii muuxanoon atii qabduu wantoota dargagootaf sababa ta'anif kana amala hin barbachisnef saxiilani , wantoota wajjin deema yeroo dargagooni shakala goodhan fi midhaa isaan irratti wal mariana.

**Qajeelfama gaafataaf** - nama deebii siif kennuuf akka inni/ishiin jecha ofiisaaniitiin deebisaniif carraa kenniif. Hanga deebisaa/deebistuun kanuma/xumureera/ siin jedhutti gaafachuu kee ittuma fufi. Jechoota haaraa ati hin beekne jala sarari

Dhuuma irratti yaada atii nu kennitanin qabxiilee waligala wanta wajjin deeman kan dargagooni saxiila bahanif fi akkami akka hambisinu baasina. Walii marii kana irratti hirmaachuuf fedhii qabda?

Yoo eeyye jette/jedhe gaaffii jalqabi

Yoo lakkii /iyyoo/jette/jedhe galaattefachudhan mari'achu dhabi

Mallattoo-----

Guyyaa----- sa'attii-----

### Mata duree hundeeffama marii kurfee wajjin

1. Dargagooni maalif amala baay'eef saxiila bahuu?

2. Amala kammitti beekamadha naanno keessanitti? Maalif?

3. Rakkoon kara walqunnamti saalattin walqabatan rakkoo baay'ee gudda jette yaada dargagootaf yookin miti? Maalif? Akkamitti? Haa marianu

Gadfageenyan ; gaaafadhu maalifaadha?

Gadfageenyan; enyuutu bay;inaan saaxilama?(saala,umrii,amala)

Gadfageenyan; furmaani isaa maal jetta?

4. Haali jireenya dargagoota amala walqunnamti saala irraatti dhiibaa qaba jette yaada? maalif? Maali hin qabnee?

5. Dargagooni mana baruumsaa keessa jira kaan mana baruumsa irra adda amaloota waliin deeman shaakaluf/hin barbachifne? Maalif? maalif adda hin taane?

6. Yeroo amma kana dargagooni hedduun amaloota wajjin deeman/hin barbachifne fayyadamu jiru?maalif?

Gadfageenyan ; wanti baay'ee asiitti fayyadaman maali?maalif?

Gadfageenyan ; hariiroo qaba wantootni fayyadaman fi midhan wol qunnamti saala irratti qabu?

Gadfageenyan; erga wantoota sana fayyadamanin booda,miiri isaan wal qunnamtii saala irratti qaban akkami?fakkeenya kennun ni danda'ama.

Gadfageenyan;fayyadamu dhiisuun hin danda'amu?maaliif?

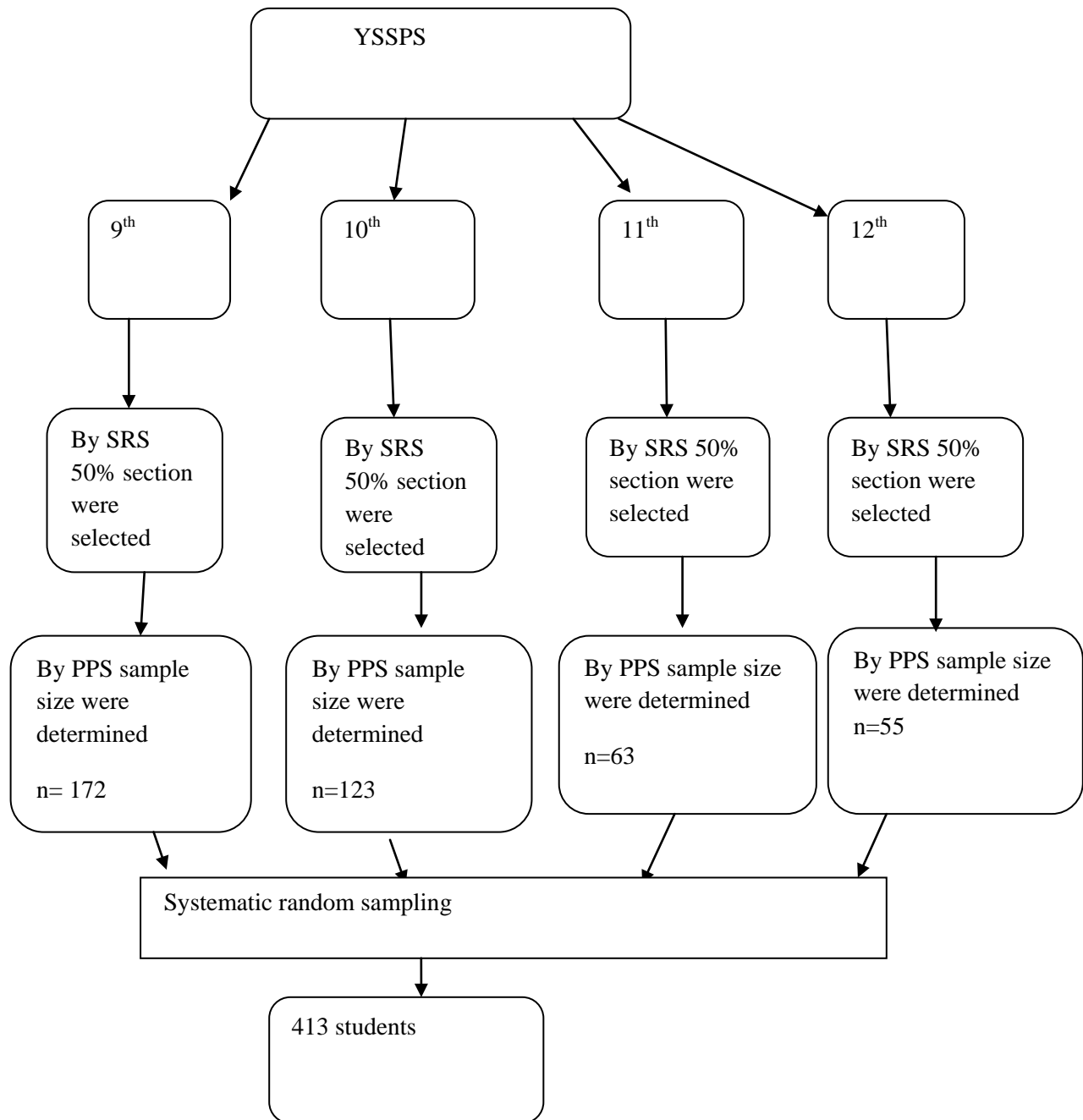


Figure three: schematic presentation of sampling procedure at YSSPS 2011/12.

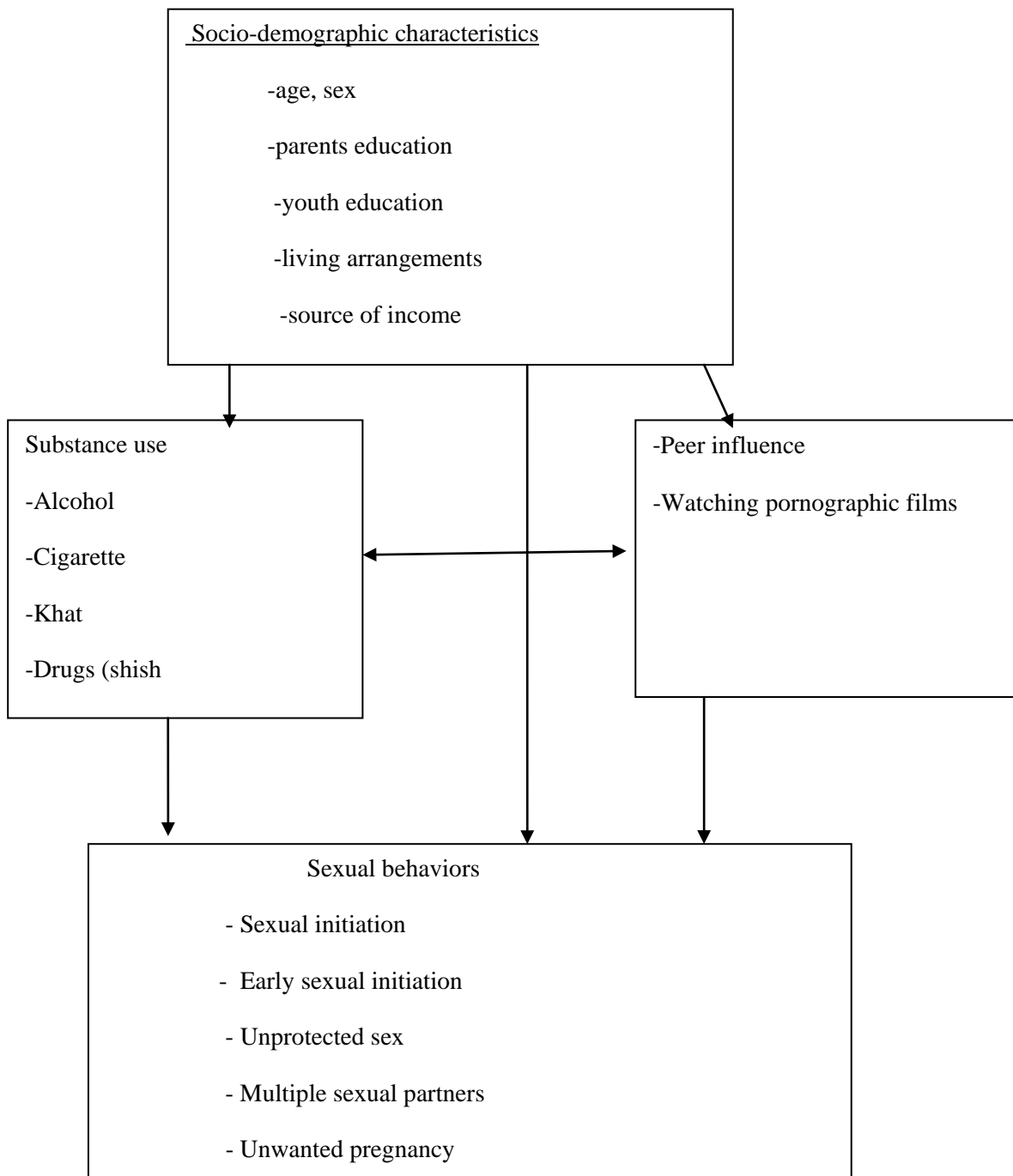


Figure 4: Schematic presentation of conceptual frame work of health risk behaviors of youths.

## **Declaration**

I, the undersigned, declare that this thesis is my original work in partial fulfillment of the Requirement for the Degree of Masters of Public Health and has not been presented for a degree in this or any other university. All source of materials used for this thesis have been duly acknowledged.

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

Name of the advisor and Signature

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