# GENDER DIFFERENCE IN RISKY SEXUAL BEHAVIOUR AND ASSOCIATED FACTORS AMONG UNDERGRADUATE STUDENTS IN DAMBI DOLLO UNIVERSITY, ETHIOPIA

Birhanu Gutu Turi, MPH[1]

## ABSTRACT

**BACKGROUND:** Risky sexual behaviour is defined as any sexual act that puts individuals at increased exposure to sexually transmitted infections including Human Immunodeficiency Virus. The prevalence of risky sexual practices is high in Ethiopia youths including students in higher education institutions. In Ethiopia young people are at high risk to acquire STI, HIV, and other sexually transmitted diseases and unintended pregnancy because of their risky sexual behaviour. These in turn affect school/academic performance and their health.

**METHODS:** Institution based comparative cross-sectional study design was used. Simple random sampling method was used to select study subjects and five hundred seventy nine students received, properly filled and returned the questionnaire. The data were collected using pretested, structured self-administered questionnaire. The data were processed using SPSS-20. Bivariate and multivariable analyses were used to identify the predictors of risky sexual behaviour.

**RESULT:** Life time risky sexual behaviour was higher in male compared to female, 181(54.8.0%) and 54(21.7%) respectively. Respondents with age less than 20 years old were less likely to have life time risky sexual behaviour. Male students were 3.5 times more likely to practice life time risky sexual behaviour compared to female. The likelihood of students ever visited night clubs to practice life time risky sexual behaviour compared to non-visitors was high. The odds of the students who ever drunk and those ever chewed Khat to commit life time risky sexual behaviour were more compared to their counterparts. Ever watching romantic films increased the odds of lifetime risky sexual behaviour compared to those who did not. Students ever attended sexual and reproductive health education tends to have more odds of lifetime risky sexual behaviour.

**CONCLUSION:** Life time risky sexual behaviour was common in this study. Significant gender difference in risky sexual behaviour was observed with higher risk in male respondents compared to female. Specific Strategies that address and promote safe sexual and reproductive health should be identified and implemented.

**KEYWORDS:** Gender; risky sexual behaviour, students, Dambi Dollo University.

(The Ethiopian Journal of Reproductive Health; 2020; 12;2: 10-20)

1 Department of Public Health, Dambi Dollo University, Ethiopia

## INTRODUCTION

Risky sexual behavior is defined as any sexual act that puts individuals at the risk of contracting sexually transmitted infections (STI) including Human Immunodeficiency Virus/acquired immune deficiency syndrome (HIV/AIDS); unplanned pregnancy; early child bearing; disability and death[1-3]. Risky sexual behavior can take several forms, including having sex with multiple sexual partners, not using or inconsistent condom use, sex under the influence of substances and initiation of sex before the age of 18 years[2]. In line with this, literatures indicated that understanding, identifying and the solution actions remain challenging[4].

Risky sexual behaviours are linked with increased risk of HIV infection, particularly among adolescents[5]. Adolescence is a period of overwhelming changes and challenges, which expose them to high-risk behaviors which entails physical risks and psychosocial harms[6]. In Sub-Saharan Africa, the chance of young adolescents to be exposed to HIV and other sexually transmitted infections (STIs) is high4 especially among women[7].

The prevalence of risky sexual practices is high in Ethiopia[2,8-10]. Youths including students in higher education institutes in Ethiopia are at high risk to acquire STI, HIV, and other sexually transmitted diseases and unintended pregnancy because of their risky sexual behaviour. These in turn results in dropout from school/poor academic performance, abortion, disability and death[11-13]. For example, the result from a study conducted among high school students in north Ethiopia pointed out significant proportion of sexually active students reported to have had pregnancy from which majority of them terminated the pregnancy[14]. A study conducted at Jigjiga also identified higher proportion of students engaged in risky sexual practice including anal and oral sex, transactional sex, inconsistent condom uses and multiple sexual partners University[15]. A study conducted at Haromaya University indicated significant numbers of students were sexually active in which more proportion of male students ever had sex compared to females and the majority started sexual intercourse before they joined university[11].

Studies revealed different factors to be associated with risky sexual behaviour; however, they were not consistent. Porn video watchers were significantly associated with ever had sex and having multiple sexual partners16, risky sexual behaviour[2,17], and not using condom during the most recent sex[18]. Visiting night clubs also reported to positively influence risky sexual behaviour. For example in one study visiting night clubs significantly associated with ever having sex[16]. Substance use before sex was among factors frequently reported to influence risky sexual behaviour. It is believed to influence the quality to make a genuine decision at sexual intercourse. Chewing Khat was stated to increase ever having sex[16], risky sexual practice8 and HIV risk behaviour[17]. Alcohol use also indicated to influence risky sexual behaviour in different studies. It was found to increase the risk of ever having sexual experiences[16], increase the probability of experiencing risky sexual activities[11,17], and the chance to engage into premarital sex[19]. Similarly studies reported that cigarette smokers are at greater risk to engage in risky sexual practice[8,11] and to commit premarital sexual intercourse[19].

Parents and peers play a role in shaping the behaviour of youths however; parental discussion with adolescents on reproductive and sexual matter seems to be unfamiliar in Ethiopia[20-22]. For example, according to the study conducted among secondary and preparatory schools' students in Debremarkos town, North West Ethiopia[20], the proportion of the students who had discussion on sexual & reproductive health issues with their parent was found to be 36.9% and significantly associated with having sexual information. However, this study revealed students who had discussion on sexual & reproductive health issues with their parent were at greater risk sexual behaviour. On the other hand, the study conducted among youths in Western Ethiopia found youths who had high family connectedness were less likely to commence sexual activity and have multiple sexual partners[23]. Culture, embarrassment and other problems like poor communication skill were among factors that hinder parent-adolescent communication about sexual and reproductive health matters[21]. Peer pressure towards sex was significantly associated with having multiple sexual partners[23]. Other factors like being male[8,11,19], sex for transaction[18] and family monthly income19 were factors also associated with at least one form of risky sexual behaviours.

The presentation of risk sexual behaviour and the conditions in which young people engage into risk sexual practice addressed in many researches in Ethiopia among students in higher institution. However, investigation on gender difference in risky sexual practice and contributing factors did not well addressed and little is known of sexual risk behaviors among Ethiopian youths across gender. Therefore, the aim of this study is to identify gender differences in risky sexual behaviour and associated factors among undergraduate students in Dambi Dollo University to help design gender based strategies to protect students in the university's context.

## METHOD:

### Study Area and Period:

The study was conducted January to February, 2011 E.C.at Dambi Dollo University. Dambi Dollo University is among the 4th generation Public University and launched in 2010 E.C. It is located in western Oromia, Kelem Wolega zone, Dambi Dollo town at 652 km from Addis Ababa. The University has six colleges and three schools with 36 total departments in a regular undergraduate program. The University has also undergraduate and post graduate studies on non-regular programs. In 2011 E.C, the university enrolled a total of 2321 students in regular undergraduate program in two batches from which 1312 (56.53%) were male and 1009 (43.47%) were female.

### Study Design and Study Population

Institution based cross-sectional study was used. The source population was all students enrolled at Dambi Dollo University. All undergraduate students of Dambi Dollo University were considered as a study population and the study unit was individual student enrolled in undergraduate study under the regular program.

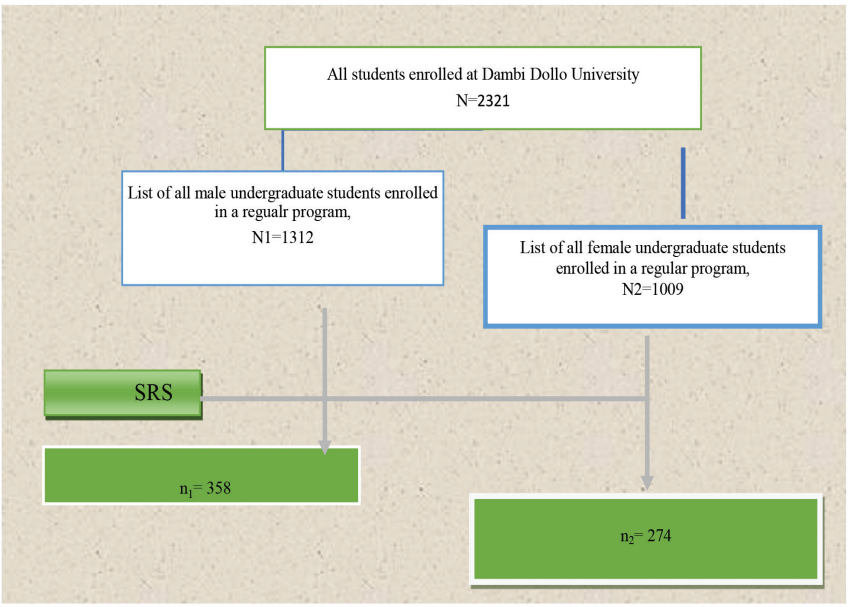
### Eligibiity Criteria

All undergraduate students enrolled under the regular program at the University were considered eligible for this study.

### Sample Size

The sample size was calculated using a formula to estimate the difference between two population proportions. By taking 22% (P1=0.22) and 15% (P2=0.15) of ever had premarital sex among male and female youths respectively from a study conducted among in-school youths at west Gojjam, North West Ethiopia [24]; a 95% confidence interval (Z=1.96), and 80% power of study and considering 10% non-response rate for each sample, the minimum sample size was 633 subjects; 358 for male and 275 for female.

**Sampling Technique:** Sampling frames containing list of all regular undergraduate students was prepared for male and female students separately. Then, computer generated simple random sampling method using SPSS version 21 was executed to draw samples from sampling frames from each group. The students' ID number and name was utilized to identify the study subjects. Figure 1 below indicates the schematic presentation of drawing study subjects.




*SRS- simple random sampling

Figure 1: Schematic presentation of the sampling method

### Data collection tool and techniques

The questionnaire was developed in English after reviewing related literatures. The data were collected using structured questionnaire. Six BSC holders collected the data and 2 MSC holders supervise the data

collection. The data collectors were responsible for the distribution, collection, checking the completeness and submission of the filled questionnaire to the supervisors while the supervisors were in a position to make sure the day to day activities of the data collectors recheck the collected questionnaires for their completeness and submit to the researcher. The data were collected by administering questionnaires at their dorm and 2 day duration was allowed to complete and return the filled questionnaire. For subjects who were absent from dorm at the allocation and return of the questionnaire, revisits were conducted until the next two days.

**Variables and Measurement**

Demographic and socio-economic variables: These variables were used to assess individual background information. These include sex, age, previous place of residence, region, marital status, religion, ethnicity, father's educational status and mother's educational status. Sex refers to the biological identity of the respondents and was measured by item with male/ female response. Age was measured in completed years in number. Place of residence refers to the place where the respondent resides before his/her university life on Urban and rural response options. Region refers to one of the 9 country's regional states where the respondent came from. Religion refers to the respondents' religious conviction and was measured on item with nominal responses. Marital status refers to the respondents' matrimonial status. Ethnicity refers to the individual race identity and was measured on nominal response question. Education indicates the parental educational status and data were gathered by two interrelated items.

Substance use: includes substances like Alcohol use, cigarette smoking and Khat chewing and was measured on items with close ended questions.

Knowledge about HIV/AIDS: refers to the individual scientific knowledge about cause, mode of transmission, risk factors, and prevention methods of HIV/AIDS and was measured by 10 true/false questions. The score was standardized to hundred by counting the number of correct answers as the sum of scores the respondent achieved divided by the maximum score the respondent would achieves times hundred percent and was classified as good and poor knowledge depending on the score.

Risky sexual behaviour: refers to any unsafe/unprotected sexual act that can enhance the transmission of HIV including sexually transmitted infections and other sexual and reproductive health problems. It was derived from individuals who have at least one or more history of premarital sex, multiple sex partner, non-condom use/ inconsistent condom use, paid sex, sex with commercial sex worker, anal sex, or oral sex.

**Data Quality Assurance**

The questionnaire checked by two experts in reproductive health for its content validity. Pre-test was conducted on 10% the respondents that were not participate in the main study and all necessary modification was made depending on the result of the analysis. The students were asked to fill honestly and return the completed questionnaire on time. The questionnaire was evaluated by experts for wordings and content validity.

**Data Processing and Statistical Analysis**

The data were entered in to computer, cleared, explored, standardized and summarized using SPSS version 20.0. Difference in risky sexual practice among students was analysed and associated factors were identified. Logistic regression was put to use to determine crude and adjusted odds ratio (AOR) in identifying associated factors. Statistical significance was measured by crude and adjusted odds ratio (AOR) with 95% confidence interval (95% CI).

**Ethical Consideration**

Approval and ethical clearance sought from Institutional Review Board in Dambi Dollo University was brought to the colleges. A consent sheet was prepared and attached to the questionnaire in a separate page. In the consent sheet, the purpose of this study was stated. To ensure confidentiality, the consent sheet will also provide information that there is no need to put their name on the survey questionnaire and that no individual response be reported. Statement about voluntary characteristic of their participation will also be provided in the consent form.

## RESULTS

Socio-demographic characteristics of respondents

Of the 633 study subjects, 579 received, properly filled and returned the questionnaire making a response

rate of 91.5% (92.2 for male and 90.5 for female). The male to female ratio was 1.3. The mean age of the study subjects were 20.8 and 20.6 years for male and female respectively. In both male and female respondents more than 50% of them were second year students, 166(50.3%) and 130(52.2%) respectively. More than 5 in 10 of the students were from rural origin from which majority were male respondents. accounting for 64.1%. Five hundred fifty seven respondents (96.2%) were single from which 313(94.8%) and 244(98.0%) were from male and from female respectively. Three different religions identified among the subjects from which Protestant were the highest, 254 (43.9%) with more girl proportion. More than half of the study subjects were from Oromo ethnic group, 172(521%) male and 143(57.4%) female (Table 1).

**Table 2: Distribution of socio demographic characteristics by sex among undergraduate students in Dambi Dollo University, Ethiopia**

| Socio-demographic | characteristics | Response by Sex Male= 330 N (%) | Total Female=249N (%) | Frequency (%) |
|---|---|---|---|---|
| Year of study | I | 164(49.7%) | 118(47.4%) | 282 (48.7) |
| | II | 166(50.3%) | 131(52.6%) | 297(51.3) |
| Previous Place of Residence | Urban | 131(39.7%) | 130(52.2%) | 261(45.1) |
| | Rural | 199(60.3%) | 119(47.8%) | 318(54.9) |
| Marital status | Single | 313(94.8%) | 244(98.0%) | 557(96.2) |
| | Ever married | 17(5.2%) | 5(2.0%) | 22(3.8) |
| Religion | Orthodox | 133(40.3%) | 111(44.6%) | 244(42.1) |
| | Protestant | 137(41.5%) | 117(47.0%) | 254(43.9) |
| | Muslim | 36(10.9%) | 16(6.4%) | 52(9.0) |
| | Others | 24(7.3%) | 5(2.0%) | 29(5.0) |
| Ethnic group | Oromo | 172(52.1) | 143(57.4%) | 315(54.4) |
| | Amhara | 103(31.2%) | 82(32.9%) | 185(32.0) |
| | Others | 55(16.7%) | 24(9.6%) | 79(13.6) |
| Father's Education | Illiterate | 126(38.2%) | 62(24.9%) | 188(32.5) |
| | Can read and Write | 104(31.5%) | 82(32.9%) | 186(32.1) |
| | Literate | 100(30.3%) | 105(42.2%) | 205(35.4) |
| Mother's Education | Illiterate | 152(46.1%) | 80(32.1%) | 232(40.1) |
| | Can read and write | 89(27.0%) | 76(30.5%) | 165(28.5) |
| | Literate | 89(27.0%) | 93(37.3%) | 182(31.4) |
| Father's Occupation | Farmer | 207(62.7%) | 171(68.7%) | 378(65.3) |
| | Gov employee | 66(20.0%) | 38(15.3%) | 104(18.0) |
| | Merchant | 37(11.2%) | 28(11.2%) | 65(11.2) |
| | Others | 20(6.0%) | 12(4.8%) | 32(5.6) |
| Mother's Occupation | Housewife | 160(48.5%) | 145(58.2%) | 305(52.7) |
| | Farmer | 86(26.1%) | 50(20.1%) | 136(23.5) |
| | Merchant | 44(13.3%) | 27(10.8%) | 71(12.3) |
| | Govt employee | 35(10.6%) | 19(7.6%) | 54(9.3) |
| | Others | 5(1.5%) | 8(3.2%) | 13(2.2) |

**Substance use and night club visit**

Of the total study subjects, 199 (34.4%) of them ever drunk alcohol. Majority of the male respondents 139 (69.8%) reported ever drunk alcohol while only 60(24.1%) of female respondent experienced drinking alcohol. In both sexes ever chewing Khat was less experienced 69 (20.9%) among male versus 25 (26.6%) among female. A few respondents, 21 (3.6%) ever smoke cigarette from which 19 (5.8%) and 28(0.8%) were from male and female respondents respectively. In our study, 83(25.2%) from male respondents and 28(11.2%) from female respondents ever visited night clubs (Table 2).

**Table 3: Distribution of the substance use and night club visit by Sex among undergraduate students in Dambi Dollo University, 2019**

| Risky lifestyle | Variables rage | Response by Sex Male N =249 | Female N= 330 | Total Frequency (%) |
|---|---|---|---|---|
| Ever drunk alcohol | Yes | 139(42.1%) | 60(24.1%) | 199(34.4) |
| | No | 191(57.9%) | 189(75.9%) | 380(65.6) |
| Ever chew Khat | Yes | 69(20.9%) | 25(10.0%) | 94(16.2) |
| | No | 261(79.1%) | 224(90.0%) | 485(83.8) |
| Ever smoke | Yes | 19(5.8%) | 2(0.8%) | 21(3.6) |
| | No | 311(94.2%) | 247(99.2%) | 558(96.4) |
| Ever visited night club | Yes | 83(25.2%) | 28(11.2%) | 111(19.2) |
| | No | 247(74.8%) | 221(88.8%) | 468(80.8) |

Sexual and reproductive health information by source

Students' exposure to sexual and reproductive health information was high having various source, majority 472 (81.5%) exposed to one or more sources. Exposure to sexual and reproductive health information was proportional among male 268 (81.1%) and female respondents 204 (81.9%). Almost half, 283 (48.9%) of the respondents seen information about sexual and reproductive health on social medias like Face book, Google, YouTube and Yahoo. Majority of the respondents, 414 (71.5%) of them, ever watched films from which 65 (15.7%) ever watched pornography films. Of the total respondents 282 (48.7%) discussed information about sexuality with their father. The proportion of father-respondent communication about sexual and reproductive health is comparative across gender, 80(24.2%) among male and 59(23.7%) among female). While 264 (45.6%) of the total study subjects ever held discussion about sexual and reproductive health with their friends, there is big difference across gender with higher proportion among male, 184(55.8%) versus 80(32.1%). Only 68 (11.7%) of the respondents ever discussed the information with their mother. Relatively female respondents, 39(15.7%), better discussed the information with their mothers than male respondents, 29(8.8%).

HIV/AIDS Knowledge

We assessed respondents' HIV knowledge by different items with true or false response categories. Majority of the respondents, 418 (72.2%) (58.6% male versus 41.4% female), knew that HIV is an immune compromising virus. Only 200 (34.5%) of the total respondents (23.0% male and 11.6% female) correctly responded, HIV-infected person can have a negative HIV test. Knowledge about the fact that HIV-infected person may not have AIDS was another problem as only 27.3% of the respondent gave the right response to the item "HIV-infected person may not have AIDS" while the response of 421 (72.7%) respondents were not correct from which 224 (67.9%) and 197(79.1%) were male and female respondents, respectively. Of the total study subjects, 79.6%, 84.1% and 86.9% of them responded lip kissing is a major mode of HIV transmission; eating food prepared by an HIV-infected person transmits HIV and handshaking with a person with AIDS transmits HIV infection respectively while 76.2% of them attested there is a "morning after" pill that prevents HIV infection. Poor knowledge about HIV observed in this study both in male and female respondents with more proportion in female (Table 3).

**Table 4: Distribution of respondents' response to HIV knowledge assessment items by their sex among undergraduate students in Dambi Dollo University, 2019**

| HIV knowledge assessment Items | | Sex | | Total |
|---|---|---|---|---|
| | | Male N (%) | Female N (%) | N (%) |
| HIV is an immune compromising virus | Yes | 245 (74.2%) | 173(69.5%) | 418 (72.2%) |
| | No | 85 (25.8%) | 76 (30.5%) | 161 (27.8%) |
| HIV infected person can have negative HIV test | Yes | 133 (40.3%) | 67 (26.9%) | 200 (34.5%) |
| | No | 197 (59.7%) | 182 (73.1%) | 379 (65.5%) |
| HIV infected person may not have AIDS | Yes | 106 (32.1%) | 52 (20.9%) | 158 (27.3%) |
| | No | 224 (67.9%) | 197 (79.1%) | 421 (72.7%) |
| HIV can be cured if treated early | No | 77 (23.3%) | 94 (37.8%) | 171 (29.5%) |
| | Yes | 253 (76.7%) | 155 (62.2%) | 408 (70.5%) |
| HIV infected person can live normal life as usual | Yes | 113 (34.2%) | 119 (47.8%) | 232 (40.1%) |
| | No | 217 (65.8%) | 130 (52.2%) | 347 (59.9%) |
| You can't get HIV the first time you have sex | No | 268 (81.2%) | 193 (77.5%) | 461 (79.6%) |
| | Yes | 62 (18.8%) | 56 (22.5%) | 118 (20.4%) |
| Lip kissing is a major mode of HIV transmission | No | 72 (21.8%) | 46 (18.5%) | 118 (20.4%) |
| | Yes | 258 (78.2%) | 203 (81.5%) | 461 (79.6%) |
| Eating food prepared by an HIV-infected person transmits HIV | No | 67 (20.3%) | 25 (10.0%) | 92 (15.9%) |
| | Yes | 263 (79.7%) | 224 (90.0%) | 487 (84.1%) |
| Hand shaking with a person with AIDS transmits HIV infection | No | 46 (13.9%) | 30 (12.0%) | 76 (13.1%) |
| | Yes | 284 (86.1%) | 219 (88.0%) | 503 (86.9%) |
| There is a "morning after" pill that prevents HIV infection | No | 56 (17.0%) | 82 (32.9%) | 138 (23.8%) |
| | Yes | 274 (83.0%) | 167 (67.1%) | 441 (76.2%) |
| Consistent and correct use of condom prevents HIV transmission | Yes | 130 (39.4%) | 143 (57.4%) | 273 (47.2%) |
| | No | 200 (60.6%) | 106 (42.6%) | 306 (52.8%) |

**Risky sexual behaviour**

Significant respondents, 218(37.7%), were experienced sexual intercourse from which 169(51.2%) were male respondents while 49(19.7%) were female respondents. The mean and median age at first sexual debut were 16.9 (SD=1.9) and 17.0, respectively. The minimum and maximum ages at first sexual intercourse were 13 and 21 years, respectively. The mean and median number of life time sexual partner was 2 (SD=2.7) and 1.0 and the minimum and maximum number of lifetime partner were 1 and 20, respectively. More than half, 123 (56.4%), of the respondents who had initiated sexual intercourse had their sexual debut at age below 18 years. Of the total 579 study subjects, 56 (25.7%) of them committed sexual intercourse with a person whom they have never seen before; 36 (16.5%) of the respondents ever committed commercial (paid) sex and 33(15.1%) committed intercourse with a person whose HIV status was unknown. Of the total 218 respondents who ever had sex, 76 (34.9%) of them ever used condom (male/female) on sexual intercourse from which 26 (34.2%) of them always use condom while 15 (19.7%) of them rarely use on sexual intercourse. Condom (male/female) use at first sexual practice was 73.7%. Anal and oral sex was reported in this study. Of the total 579 respondents 45 (7.8%) of the respondents committed anal sex from which only 29 (64.4%) of them utilized condom. Another 50 (8.6%) of the respondents committed oral sex from which 31 (62%) used barriers.

**Determinants of Life time risky Sexual Practice**

We conducted multivariate analysis to determine the predictors of lifetime risky sexual behaviour among the study subjects. We entered variable statistically significantly associated with lifetime risky sexual behaviour from bivariate analysis on Forward Stepwise (Likelihood Ratio) methods. Respondents with age less than 20 years were less likely to have life time risky sexual behaviour, (adjusted OR [95%CI] = 0.2 [0.1, 0.4]). Male students were 3.5 times more likely to practice life time risky sexual behaviour compared to female (AOR [95%CI] = 3.5 [2.3, 5.3). The likelihood of students ever visited night clubs to practice life time risky sexual behaviour compared to non-visitors was high (adjusted OR [95%CI] = 2.5 [1.4, 4.4). The odds of the students who ever drunk and ever chewed Khat to commit life time risky

sexual behaviour were more than those who never did (AOR [95%CI] = 7.3[3.7, 14.3) for chewing and AOR (95% CI) of 1.6 (1.0, 2.4) for alcohol. Ever watching romantic films increased the odds of lifetime risky sexual behaviour by 1.9 (adjusted OR [95%CI] = 1.9[1.2, 2.9]) compared to those who did not. Students ever attended sexual and reproductive health education tends to have more odds of lifetime risky sexual behaviour, (adjusted OR [95%CI] = 1.8[1.2, 2.8]) (Table 4).

**Table 4: Factors predicting lifetime risky sexual practice among undergraduate students in Dambi Dollo University, 2019**

| Variables | Life time Risky Sexual Behaviour | | Adjusted OR [95.0% C.I] |
|---|---|---|---|
| | Yes N (%) | No N (%) | |
| Age category (<20 years) | 18 (3.1%) | 83 (14.3%) | 0.2 [0.1, 0.4] |
| Sex (Male) | 181 (31.3%) | 149 (25.7%) | 3.5 [2.3, 5.3] |
| Ever visited night club | 81 (14.0%) | 30 (5.2%) | 2.5 [1.4, 4.4] |
| Ever drunk alcohol | 118 (20.4%) | 81 914.0%) | 1.6[1.0,2.4] |
| Ever chewed Khat | 77 (13.3%) | 17 (2.9%) | 7.3 [3.7, 14.3] |
| Ever watched Pornographic films | 199 (34.4%) | 215 (37.1%) | 1.9 [1.2, 2.9] |
| Ever attended SRH education | 122 (21.1%) | 106 (18.3%) | 1.8 [1.2, 2.8] |

## DISCUSSION

Big gender difference in risky sexual behaviour was observed in our study. The risky sexual behaviour was about 33% higher in male respondents compared to female, 181(54.8%) versus 54(21.7%). Similar with the result from a study conducted at Haromaya University[12], our study revealed more proportion of male students ever had sex compared to females (51.2% versus 19.7%). This finding is also supported by systematic review of similar studies in Ethiopia[2]. This finding indicates the study subjects are at higher risk of acquiring HIV and other STIs. For example, a research conducted among the University of Limpopo students in South Africa, defined risky sexual behaviors as sexual activities that may expose an individual to the risk of infection with HIV and other STIs[3].

The odds of the students less than 20 years old found to be independently less likely to practice life time risky sexual practice. This indicates that as age advances, respondents more engage in risky sexual behaviour. As an evidence for this the finding of a study conducted in South Africa illustrate the proportion of high probability of HIV infection and STI increased significantly with increasing chronological ages[25].

In our study, the odds of male students was 3.5 times more likely to commit life time risky sexual behaviour as compared to female. This finding was consistent with that of the Haromaya University students' finding[12]. Other researchers' findings are also comparable with our study[2,19]. On the other hand, study conducted in Nigeria showed no significant difference on the expression of undergraduates on predisposing factors influencing risky sexual behaviours[26]. However, these variations among gender may does not mean that women are protected rather both sex exhibited risky sexual behaviour because social inequalities and poverty place women at an elevated risk, and they have limited access to HIV or sexual reproductive health education, so they become more vulnerable to HIV and SRH-related problems[27].

Ever visiting night clubs predicted the lifetime risky sexual behaviour. Visiting night clubs has been known to increase the youths' risk of committing risky sexual behaviour16. Substance uses were detected to predict lifetime risky sexual behaviour. For example use of Khat and alcohol were significantly independently associated with lifetime risky sexual activities. These findings were consistent with finding of similar studies in other areas[2,8,11,16]. Ever watching pornography revealed risky life time sexual practice. The odds to have life time risky sexual practice was 1.9 more among respondents ever watched pornography than that of the counterpart. Alike our finding, watching pornography were factors associated with an increased in risky sexual practices in a systematic review of similar studies[2].

Even if attending sexual and reproductive health education theoretically expected to improve the youths' safe sexual practice, the finding of this study indicates that respondents ever attended sexual and reproductive health education were more likely practiced lifetime risky sexual practice. This may be due to sequence in risky sexual practice and their participation on the education,

which means the students may attended education after they had committed risky sexual practice. On other hand, education by itself may not reduce risky sexual practice until it brings change in knowledge, attitude, value and skill in safe sexual practice.

## CONCLUSION

Life time risky sexual behaviour was common in this study. Big gender difference in lifetime risky sexual behaviours observed with higher risk in male respondents compared to female. Age less than 20 years exhibited less likely to practice lifetime risky sexual behaviour keeping other factors constant. Significant male compared to female respondents also practice lifetime risky sexual behaviours controlling for other confounders. The finding from our study also indicates that substance use, attending night clubs, and watching romantic films were found to be independent predictors of lifetime risky sexual behaviour. To bring change in health behaviour, promoting youth responsibility for sexual and reproductive health through health-related education, establishing a dialogue on possible solutions and how to put them into effect, fostering community self-reliance and ownership of health initiatives are mandatory.

## AVAILABILITY OF DATA AND MATERIAL

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

## CONFLICT OF INTERESTS

The author declares that they have no competing interests. The author performed the designing of the study, analysis, and interpretation of data and writing this manuscript and has agreed both to be personally accountable for the author's own contributions and to ensure that questions related to the accuracy or integrity of any part of the work.

## FUNDING STATEMENT

This research was funded by Dambi Dollo University. As the funding body, the university has no role in the designing of the study and collection, analysis, and interpretation of data and in writing this manuscript

## ACKNOWLEDGEMENT

My sincere thank goes to the University Research and Technology Innovation Directorate Director and University Research Review Committee for their unreserved support and facilitation to accomplish this work. In addition I would like to forward my great thanks to Registrar/Alumni Director and staff for giving me detail students' information. The College's Research Review committee and the College's Research coordinator also share my deepest gratitude for their support. Finally, I would like to acknowledge the students for their cooperation in participating in this study.

## CORRESPONDING AUTHOR:

Birhanu Gutu Turi, MPH
Department of Public Health, Dambi Dollo University, Ethiopia
Email: birhanugutu@yahoo.com

## REFERENCES

1. Salam, R.A., et al., Improving Adolescent Sexual and Reproductive Health: A Systematic Review of Potential Interventions. Journal of Adolescent Health, 2016. 59(S11eS28): p. S11-S28.
2. Muche, A.A., et al., Prevalence and determinants of risky sexual practice in Ethiopia: Systematic review and Meta-analysis. Reproductive Health, 2017. 14(113).
3. Hoque, M.E., Reported risky sexual practices amongst female undergraduate students in KwaZulu-Natal, South Africa. Afr J Prm Health Care Fam Med, 2011. 3(1).
4. Rutaremwa, G., et al., Association between Risky Sexual Behaviour and having STIs or HIV among young persons aged 15-24 years in Uganda
5. Kharsany, A. and Q. Karim, HIV Infection and AIDS in Sub-Saharan Africa: Current Status, Challenges and Opportunities. The Open AIDS Journal, 2016. 10: p. 34-48.
6. Alimoradi, Z., et al., Contributing Factors to High-Risk Sexual Behaviors among Iranian Adolescent Girls: A Systematic Review. IJCBNM. 2017;5(1):2-12.
7. Mathews, C., et al., Effects of PREPARE, a Multi-component, School-Based HIV and Intimate Partner Violence (IPV) Prevention Programme on Adolescent Sexual Risk Behaviour and IPV: Cluster Randomised Controlled Trial. AIDS Behav, 2016. 20: p. 1821-1840.
8. MAMO, K., E. ADMASU, and M. BERTA, Prevalence and Associated Factors of Risky Sexual Behavior among Debremarkos University Regular Undergraduate Students, Debremarkos Town North West Ethiopia. Journal of Health, Medicine and Nursing, 2016. 33: p. 40-50.
9. Gemeda, T.T., A.U. Gandile, and D.S. Bikamo, HIV/AIDS Knowledge, Attitude and Practice among Dilla University Students, Ethiopia. African Journal of Reproductive Health September 2017; 21 (3):50-61.
10. Mengistu, T.S. and A.T. Melku, Sexual and reproductive health problems and service needs of university students in south east Ethiopia: Exploratory qualitative study. Science Journal of Public Health 2013; 1(4): 184-188.
11. Derese, A., A. Seme, and C. Misganaw, Assessment of substance use and risky sexual behaviour among Haramaya University Students, Ethiopia. Science Journal of Public Health:2014; 2(2): 102-110.
12. Dingeta, T., L. Oljira, and N. Assefa, Patterns of sexual risk behaviour among undergraduate university students in Ethiopia: a cross-sectional study. Pan African Medical Journal. 2012; 12:33.
13. Federal Democratic Republic of Ethiopia; Ministry Of Health: National Reproductive Health Strategy: 2006 - 2015.
14. Adama, Y., et al., Sexual and reproductive health communication and awareness of contraceptive methods among secondary school female students, northern Ethiopia: a cross-sectional study. BMC Public Health 2014, 14:252.
15. Mavhandu-Mudzusi, A.H. and T. Tesfay, Azwihangwisi Helen Mavhandu-Mudzusi, Teka tesfay A. The prevalence of risky sexual behaviours amongst undergraduate students in Jigjiga University, Ethiopia: health sa gesondheid 21 (2016) 179e186.
16. Mulu, W., M. Yimer, and B. Abera, Sexual behaviours and associated factors among students at Bahir Dar University: a cross sectional study. Reproductive Health 2014, 11:84.
17. Tadess, M., Substance abuse and sexual HIV-risk behaviour among Dilla University students, Ethiopia Educational Research, 2014. 5(9.): p. 368-374.
18. Tadesse, G. and B. Yakob, Risky Sexual Behaviors among Female Youth in Tiss Abay, a Semi-Urban Area of the mhara Region, Ethiopia. PLoS ONE 10(3): e0119050. doi:10.1371/journal.pone.0119050.
19. Kalu, A., et al., Premarital Sexual Practice and Associated Factors among Robe TVET Students at Robe Town, Bale Zone, Oromia Region, Southeast Ethiopia,2016. MOJ Public Health; Volume 5 Issue 6 - 2017.
20. Shiferaw, K., F. Getahun, and G. Asres, Assessment of adolescents' communication on sexual and reproductive health matters with parents and associated factors among secondary and preparatory schools' students in Debremarkos town, North West Ethiopia. Reproductive Health 2014, 11:2.
21. Ayalew, M., B. Mengistie, and A. Semahegn, Adolescent - parent communication on sexual and reproductive health issues among high school students in Dire Dawa, Eastern Ethiopia: a cross sectional study. Reproductive Health, 2014. 11(77).
22. Ayehu, A., T. Kassaw, and G. Hailu, Young people's parental discussion about sexual and reproductive health issues and its associated factors in Awabel woreda, Northwest Ethiopia. Reproductive Health (2016) 13:19.
23. Legesse, E., Assessment of risky sexual behaviors and risk perception among youths in Western Ethiopia: the influences of family and peers: a comparative cross-sectional study. BMC Public Health 2014, 14:301.
24. Bogale, A. and A. Seme, Premarital sexual practices and its predictors among in-school youths of shendi town, west Gojjam zone, North Western Ethiopia. Reproductive Health 2014, 11:49.

25. Veronica, T., Determinants of Risky sexual behaviors among undergraduate students of Walter Sisulu University in the Eastern Cape, South Africa: STTI Nursing Conference: 21 - 25 July 2016.
26. FLORENCE, Y. Predisposing factors influencing risky sexual behaviours as expressed by undergraduates in Osun state Nigeria. Proceedings of INCEDI 2016 Conference, Ghana.
27. Lamesgin, A., HIV/AIDS and Sexual Reproductive Health among University Students in Ethiopia: A Policy Intervention Framework. November 2013.