

Magnitude of Pre-marital Sexual Practice and its Associated Factors among Mizan Preparatory School Students in Mizan Aman Town, South West Ethiopia

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Abstract

Background: Premarital sexual practice increases adolescents risk for infection with HIV and other STDs. In Ethiopia, an increasingly large number of adolescents are enrolled in preparatory schools. Early initiation to sexual intercourse without having proper protection has been one of the concerns.

Objective: The objective of this study was to assess magnitude of premarital sexual practice and associated factors among Mizan preparatory school students in Mizan town, south west Ethiopia.

Methodology: A cross-sectional study design was conducted from April 9 to June 20, 2017. Data collection tool used in this study was structured self-administered questionnaire. Data was checked for completeness and accuracy and entered to SPSS version 21 software packages for analysis. Frequency distribution, charts, figures and tables were used to present the results. Odd ratio and Logistic regression with 95% confidence intervals were used to see the association between explanatory variables with premarital sexual practice.

Result: Of 320 study participants, 25.2% (56.6% of males and 43.4% of females) of them reported as they had practiced premarital sexual intercourse before. Drinking alcohol (AOR=4.06, [95%CI: 2.06-7.99]), watching pornographic films and educational status of mother were significantly associated with premarital sexual practices. The reasons cited for the initiation of the first sexual intercourse were fall in love (38.2%), had desire (27.6%), rape (3.9%), peer pressure (10.6%), to get money/gifts (7.9%) were drunk (2.6%) and other 9.2%.

Conclusion and recommendation: In this studied area the prevalence of premarital sexual practices among students were significant in contrast to other similar regions of the country. Moreover, practicing risky sexual behaviors such as khat chewing, drinking alcohol, smoking cigarette at early age were the common. Therefore, it is imperative to bring behavioral change through establishing and strengthening school anti AIDS clubs and integrating reproductive health education at all levels of schools.

Key words:

Premarital sex; Risk factors; Sexual practice; Preparatory students; Ethiopia

Introduction

The World health organization (WHO) defines adolescent people as those between the ages of 10-19 years. Adolescence is the time of transition from childhood to adulthood during each young people experience significant physiological, psychological and social changes following puberty which is difficult phase if it is not handled properly [1]. Because, young peoples are at high risk of practicing risky premarital sex, due to the risk taking behavior during this age group [2]. Premarital sex is explained as a penetrative vaginal or anal sexual intercourse performed between couples before formal marriage. It is characterized as being unanticipated, unpredictable, inconsistency with values and personality, uncontrollable and becoming the common feature of adolescents [3].

More than half of the world population constitutes of young people's less than 25 years old, and majority of these populations live in

developing country [2]. Premarital Sexual activities among adolescents have been reported to be increasing. Several studies in sub Saharan Africa have documented high and increasing premarital sexual activities among adolescents [4]. Starting from a recent time, premarital sexual action during adolescence and emerging adulthood leads to a wide range of adverse outcomes in sub Saharan Africa, including unintended pregnancies, illegal abortions, and sexually transmitted infections [5].

Premarital sex and early initiation of sexual activity may prolong the period of exposure to risks of unwanted pregnancy and contracting STDs including; HIV/AIDS during their reproductive life span [6]. Ethiopia is one of a country where an increasing number of adolescents are involved in unsafe sexual practices and hence face undesired health outcomes such as unplanned pregnancy, too early childbirth, unsafe abortion and sexually transmitted disease. This is may be enhanced as a result of an increasingly large number of adolescents enrollment in preparatory schools [7]. Recently, early initiation to sexual intercourse without having proper protection has been one of the concerns. Adolescents often encounter high-risk situations, such as contracting STD/HIV/AIDS and often experience unintended pregnancy, illicit abortions and its negative sequel [8].

A study conducted in Bahir dar showed that among unmarried high school female students 30.8% reported pre-marital sexual debut and 6.5% of them was self-reported STIs. But the actual number may be higher as people may not so open in disclosing such issues because of related stigmas [9]. Another study done among Ambo high school students revealed that 18(30.5%) of sexually active female students had got pregnant at least once prior to the study out of which 12(66.7%) reported history of abortion and from sexually active male respondents 15(15.94%) were also impregnated at least once prior to that assessment [10]. Another study done in Jimma preparatory school students revealed living away from parent, alcohol drinking, cigarette smoking khat chewing, peer pressure, watching pornography and being dissatisfied with parental connection were the main predictor factors for premarital sexual practice [11].

Thus premarital sex remains one of the most sensitive public health problems in developing countries including Ethiopia. It is imperative to identify magnitude premarital sex and its predictors to design appropriate strategy to minimize its effect. However, researches done on this area is minimal in the country level as well there are no recent studies adequately studied in Mizan Town (study area). Therefore, this study will generate information on prevalence of premarital sexual practice and ascertain existing significant factors associated with it.

Such information would be vital for designing, implementing and monitoring of adolescent reproductive health programs by different stakeholders which are very essential to prevent health consequences of premarital sexual practice among this increasing population groups. Also the study findings could further benefit future researchers who are interested in the area.

Objectives

General objective

To assess prevalence of premarital sexual practice and associated factors among preparatory school students in Mizan town South West Ethiopia

Specific objectives

- To assess the prevalence of premarital sexual practice among Mizan preparatory school students in Mizan town, SWE.
- To assess factors associated with premarital sexual practice among Mizan preparatory school students in Mizan town, SWE.

Methods and Materials

Study area and design

Institution based cross-sectional study design was conducted in Mizan town preparatory school from April 9 to June 20, 2017. Mizan town is located 561 km from Addis Ababa in south west region of Ethiopia and 835 km from regional town, Hawassa. Based on 2009 fiscal year of Mizan preparatory has total of 1059 students among this 486 were grade 11(292 males and 194 females) and 573 were grade 12(346 males and 227 females). There were also governmental colleges where many students are attending their study after completing their high school level education.

Populations

Source population

The source population for this study was all students attending preparatory (grade 11 and 12) school in Mizan town.

Study population

The study population was students attending preparatory school in Mizan town and eligible to participate in this study.

Sample size determination

To estimate the students required for this study a single population proportion formula ($n = (Z \alpha/2)^2 p(1-p)/d^2$), was used. Accordingly, the following assumptions were used as an input to the formula and p-value obtained from study conducted in Jimma preparatory school, prevalence of premarital sex and associated factors among preparatory school students 21% ($p=0.21$) [11], confidence interval of 95% ($Z=1.96$) and margin of error 4% ($d = 0.04$). Computing with the above formula and 10% of contingency for non-respondent rate gives a total sample size required was of 320.

$$n = Z^2 (1-\alpha) (P) (1-P)/d^2$$

n=initial sample size

Z=value of random variable related to 95% CI

d=desired margin of error

The total number of students attending preparatory schools in Mizan (N) is assumed to be around 1059.

$$\text{Thus, } n = (Z_{\alpha/2})^2 pq/d^2$$

$$= (1.96)^2 (0.21) (0.79) / (0.04)^2$$

$$= 398.$$

Since the total population is less than 100,000 the following correction formula is used

$$N_0 = n / (1 + n/N)$$

$$= 398 / (1 + 398/1059)$$

$$= 291.$$

$N_{\text{final}} = n / (1 + n/N)$, where, N_{final} =final sample size computed correction factor, n=initial sample size without considering correction factor, N was the total size of the study population (Total number of preparatory school students in Mizan). We used non-response rate of 10%, after replacing values in the formula for finite population correction, the needed sample size was 320.

Sampling procedure

To obtain a representative sample, we use multi stage sampling. The students were stratified first by grade as grade 11 and 12. Then each grade student will be stratified by sections and representative sections selected by lottery method. From grade 11 we selected two sections. Section B (81), and section E (84) and from grade 12 section A (82), D (80) and F (82) were selected. The total sample size (320) was proportionally allocated for each grade;

Grade 11 = $320 \times 486 / 1059 = 147$, Grade 12 = $320 \times 573 / 1059 = 173 = 147 + 173 = 320$

Then we allocated the number of students for each section using proportional allocation as follow.

Section 11B; $81 \times 147 / 165 = 72$, Section 11E; $84 \times 147 / 165 = 75$ and Section 12A; $82 \times 173 / 244 = 58$, Section 12D; $80 \times 173 / 244 = 57$ and Section 12F; $82 \times 173 / 244 = 58$.

From each section the first student was selected by lottery method, we distributed the questionnaire until the calculated sample in each section reached. Accordingly, 320 samples were selected randomly from 13 sections (6 grade 11 and 7 grade 12) Figure 1.

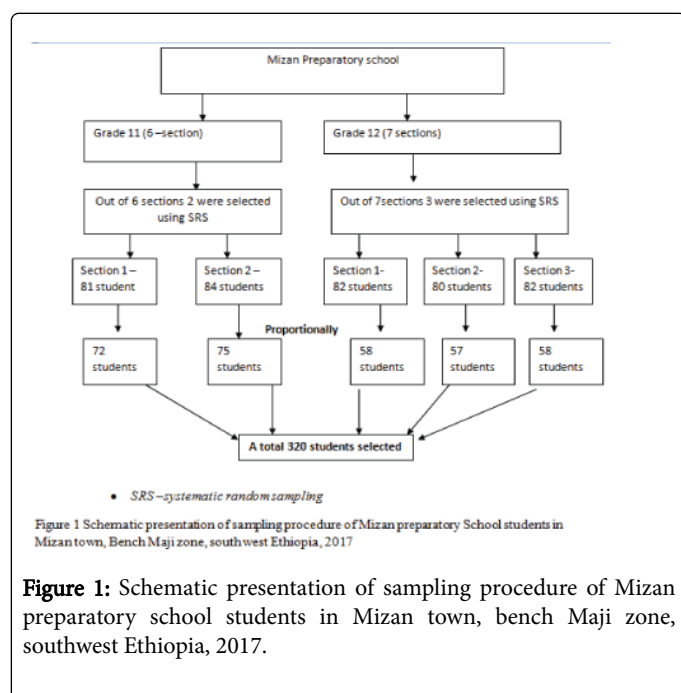


Figure 1: Schematic presentation of sampling procedure of Mizan preparatory school students in Mizan town, bench Maji zone, southwest Ethiopia, 2017.

Inclusion and exclusion criteria

Inclusion criteria

All regular students attending their regular education at the time of data collection was included.

Exclusion criteria

Students who were absent during data collection and who were critically ill students during data collection were excluded from the study.

Data collection tools

Close ended structured self-administered questionnaire was used to collect data. The questionnaires were prepared first in English then in Amharic and translated back to English to check its consistency. Prior to the actual data collection time, pretest was conducted in other preparatory school students to check its reliability.

Data quality control

Data was collected by three graduating PH students at college of health science. Great attention was given to check completeness of the questionnaires and completeness of filled questionnaire was checked daily by data collectors. Data collectors were trained before the actual data collection time.

Data processing and analysis

After ensuring completeness of each and every questionnaire, data was labeled entered in to computer software package SPSS version 21 for proper analysis. Subsequently data cleaning, coding and preparation for final analysis were performed. Descriptive statistics was used; mean and standard deviation for continuous variables and frequency distribution, charts, figures and tables were used to present the results of categorical variables. Odd ratio and Logistic regression with 95% confidence intervals were used to see the association between independent predictors of premarital sexual practice with premarital sexual practice and p-value less than 0.05 was used to declare statistical significance.

Operational definitions

Premarital sexual practice: a vaginal sexual intercourse that student self-reported experience before marriage and may or may not end with marriage.

Peer pressure: when the individual said yes/no to question saying "did your friend initiate you to do sex?"

Substance use: Use of at least any one of the following substances: alcohol, Khat, and cigarette that were assumed to affect level of thinking and increase risk of involving in sexual practice.

Pornography: films intended for sexual excitement

Sexual history: An individual who had history of sexual intercourse.

Study Variables

Dependent variable

- Pre-marital Sexual practice

Independent variables

- Socio-demographic variables (age, sex, grade level, ethnicity, religion, marital status, parental education status, family monthly income and Place of residence)
- Substance use (alcohol consumption, Khat chewing, or cigarette smoking)
- Recreational mechanism (watching pornography, smoking & alcohol drinking) and peer pressure etc.

Ethical considerations

Permission letter was written by the college of health science, department of public health to Mizan preparatory school. A formal letter, from the University was submitted to the director of the school. The vice directors and teachers of the school were also informed and requested their permission to conduct the study. The purpose of study was explained to the study subject at the time of data collection and verbal consent was taken from participants to conform whether they

were willing to participate. Those not willing to participate were given the right to do so.

Result

Socio-Demographic characteristics of study participants

From a total of 320 students who were identified for the study, 302 were participated in our study while the rest 16 did not return our questionnaire or refused to complete the questionnaire, yielding the response rate of 94.96%.

More than half of the respondents 175(57.9%) were found between the age group of 15-19 years. One hundred seventy three (57.3%) of the study subjects were males and the remaining 129(42.7%) were females. Majority, 131(43.4%), of them were followers of Orthodox Christian religion. Ethnic groups with large numbers were Amhara 88(29.1%) followed by Bench 76(25.2%). Majority of the respondents 288(95.4%) were never married, 5(1.7%) were currently married and 9(3%) were divorced (10 married before the age of 18 but 4 at and above 18 year).

Regarding place of residence more than three quarter 229(75.8%) were from urban but the rest 73(24.2%) were from rural areas. Majority, 107(35.4%), of them have father who had completed College/ University. Majority, 93(30.8%), of students mothers can read and write, and 60(19.9%) of them were illiterate. Nearly three quarter 228(75.5%) of the study participants were living with their families while the rest 74(24.5%) were living away from their families, 22(7.3%) live with their relative, 20(6.6%) live with friend, 27(8.9%) live alone and 5(1.7%) live with other.

More than half 188(62.3%) of the respondents do not work to get money and the rest one hundred fourteen (37.7%) work different type of jobs to get money. These include 20(6.6%) were shop keeper 19(6.3%) were labor worker, 16(5.3%) were shoe shining, 10(3.3%) were café servant, and 49(16.2%) work other jobs (Table 1).

Variables	Characteristics	Frequency (n=302)	Percent (%)
Age(years)	15-19	175	57.9
	20-24	124	41.1
	>=25	3	1.0
Sex	Male	173	57.3
	Female	129	42.7
Religion	Orthodox	131	43.4
	Protestant	109	36.1
	Muslim	47	15.6
	Catholic	9	3.0
	Other	6	2.0
Ethnicity	Bench	76	25.2
	Kaffa	52	17.2
	Amhara	88	29.1
	Other (Hadya, Oromo, Tigre, Gurage)	86	28.5
Current marital status	Single	288	95.4
	Married	5	1.7
	Divorced	9	3.0

Students currently live with	Parents	228	75.5
	Relative	22	7.3
	Boy friend	20	6.6
	Alone	27	8.9
	Other	5	1.7
Educational status of father	Illiterate	36	11.9
	Read and write	66	21.9
	Grade 1-8(primary)	48	15.9
	Grade 9-12(secondary)	45	14.9
	College/university	107	35.4
Educational status of mother	Illiterate	60	19.9
	Read and write	93	30.8
	Grade 1-8	27	8.9
	Grade 9-12	58	19.2
	College university	64	21.2
Families monthly income (EtBirr)	<500	37	12.3
	500-1000	75	24.8
	1000-1500	50	16.6
	1500-2000	38	12.6
	> 2000	102	33.8
School fee Covered by (n=302)	Father	61	20.2
	Mother	34	11.2
	Both	187	61.9
	Myself	20	6.6
Religious services	Attend daily	152	50.7
	Attend monthly	83	27.5
	Attend once a year	11	3.6
	Attend <once a year	3	1.0

Table 1: Socio demographic and Socio-Economic characteristics of Mizan preparatory School students in Mizan town, Bench Maji zone, south west Ethiopia, 2017.

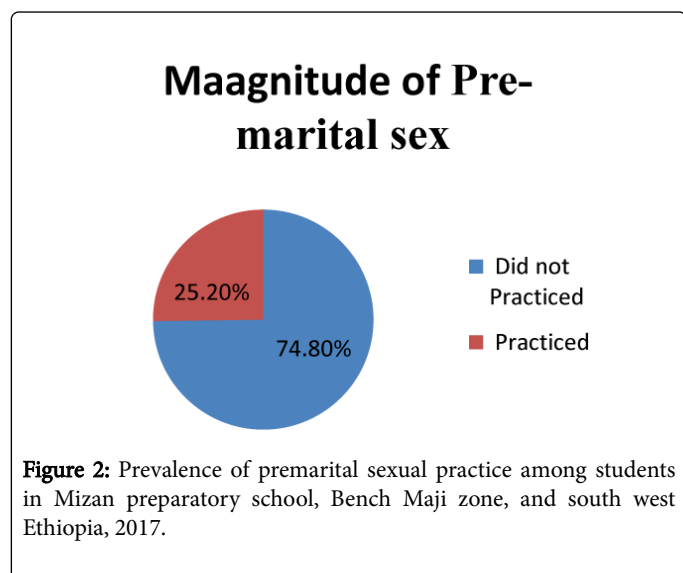
Among 302 study participants, 73(24.2%) and 36(11.9%) of respondents replied as they consumed of khat and cigarette respectively. Ninety one, (30.1%), of respondents reported alcohol consumption either always, usually or sometimes (Table 2).

Premarital Sexual History of the Participants

Prevalence of premarital sexual practice: The prevalence of premature sexual practice among Mizan preparatory students was 25.2%. Fifty eighty, 58(76.3%), of them had experienced sexual intercourse with their boy/girlfriend, 7(9.2%) with teacher, 6(7.9%) with spouse, 4(5.3%) with stranger and the remaining 1(1.3%) was raped. The minimum age at which the study subjects had sexual intercourse was 10 year while the maximum age of their first sexual partner for female students was 53 year Figure 2.

Variable	Frequency (n=302)	Percent (%)
Khat Chewing	73	24.2
Yes	229	75.8
No		
Alcohol drinking	91	30.1
Yes	221	69.9
No		
Cigarette Smoking	36	11.9
Yes	266	88.1
No		
Watched pornography movie	129	42.7
Yes	173	57.3
No		

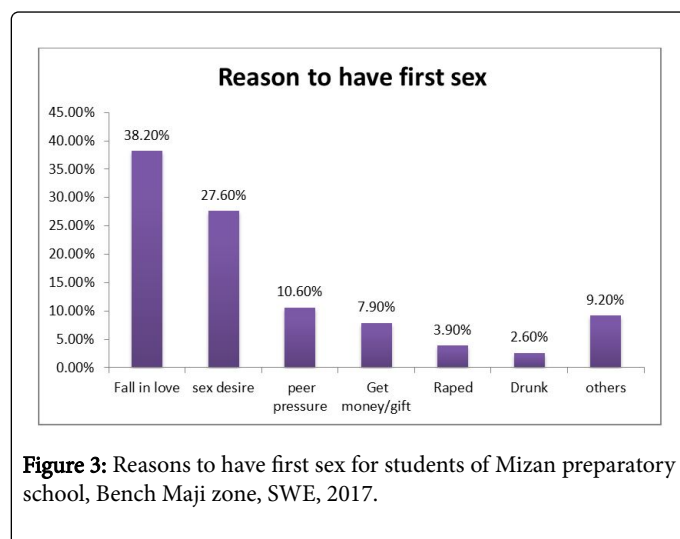
Table 2: Risk behaviors and practices among Mizan preparatory school students, Bench Maji zone, SWE, 2017.



The reasons reported by students for initiation of premarital sexual practice

The main reason reported for initiation of sexual intercourse was fall in love which accounted 29(38.2%) among all mentioned reasons. 21(27.6%) had desire to have sexual intercourse, 8(10.6%) due to peer pressure, 6(7.9%) to get money/gift 3(3.9%) were raped, 2(2.6%) was drunk, and the remaining 7(9.2%) had sexual intercourse due to peer pressure, fall in love and sex desire Figure 3.

When concerning the total number of sexual partner they have had sexual intercourse yet, majority, 62(81.6%) of them has had sex with one partner. Among the study participants who have experienced sexual intercourse (76 students), half 38(50%) of them had sexual intercourse in the last 12 months prior this study. Regarding safe sexual practice, majority of them 33(43.4%) of the students were used condom in their first sexual intercourse 15(45.5%) used always and 18(54.5%) used occasionally, and the rest 43(56.6%) did not use condom during their first sexual practice.



Majority, 10(23.8%), of respondents who had sex without condom replied as they were ashamed of to ask their partner as a reason (Table 3).

Variables	Category	Frequency	Percent (%)
Have boy/girl friend	Yes	128	42.4
	No	174	57.6
Premarital sex practice	Yes	76	25.2
	No	226	74.8
Age at first sexual Intercourse (n=76)	10-14	13	3.0
	15-19	61	13.6
	>=20	2	8.6
Age of first sexual Partner (n=76)	10-14	5	6.6
	15-19	27	35.5
	20-24	8	10.5

	Did not know	36	47.4
Consumed any alcohol or used 'khat' during first sex	Yes	24	7.9
	No	52	17.2
First Sexual partner (N=302)	Spouse	6	7.9
	Boy/girl friend	58	76.3
	Teacher	7	9.2
	Stranger	4	5.3
	Who forced me	1	1.3
Used condom during first sexual intercourse (n=76)	Always	33	43.4
	Sometimes	43	56.6
Reasons for nonuse of condom always (n=43)	Not available	5	11.9
	Ashamed to ask partner	10	23.8
	It was costly	2	4.8
	Ashamed to buy	9	21.4
	I was drunk	3	7.1
	Didn't think it	4	9.5
	Don't know how to use	1	2.4
	Decrease satisfaction	2	4.8
	Prohibited by religion	5	11.9
	Other	1	2.4
Sexual intercourse after drinking alcohol (n=76)	Yes	23	30.3
	No	53	69.7
Sexual intercourse after smoking cigarettes (n=76)	Yes	9	11.8
	No	67	88.2

Sexual intercourse after khat chewing (n=76)	Yes	16	21.1
	No	60	78.9
Number of sexual partner (n=76)	One	14	18.4
	Two or more	62	81.6
Had sex in the past 12 months (n=76)	Yes	38	50.0
	No	38	50.0

Table 3: Premarital sexual practices and behavior among students of Mizan preparatory school, Bench Maji zone, SWE, 2017.

Factors associated with pre-marital sex

Among the socio-demographic variables, age, sex, grade, religion, marital status, and place of residence as well as from the behavioral variables, drinking alcohol, cigarette smoking and chewing khat, from recreational activities watching pornography were evaluated using logistic regression against premarital sexual practice.

The variables having significant association at bivariate level were educational status of mother, attending religious service, school fee, khat chewing, drinking alcohol, smoking cigarette, watching pornography and peer pressure.

The variables significantly associated at bivariate level (i.e. $p < 0.05$) were entered to multinomial model. We also entered those border line variables ($p < 0.2$) to multinomial model not to miss variables because of possible confounding.

Even though many variables are significantly associated to premarital sex at bivariate level, the variables having significant association at multivariate level were educational status of mother, drinking alcohol, and watching pornography this may be due to similar socio demographic characteristics of the respondents may cause loss of association (i.e. cigarette smoking may confound with alcohol drinking and at bivariate level their OR is reduced by half) (Table 4).

Variable	Category	Pre-marital sex		COR (95% C/I)	AOR (95% C/I)
		Yes	No		
Age (years)	15-19	47(26.9%)	128(73.1%)	0.806(0.47- 1.4)	
	≥ 20	29(22.8%)	98(77.2%)	1	
Educational status of mothers	Collage and above	10(13.2%)	54(23.9%)	0.5(0.22-1.14)	0.33(0.13-0.84)*
	Primary and secondary	23(30.3%)	62(27.4%)	0.47(0.22-1.01)	0.77(0.38-1.58)
	Not attended formal education	43(56.6%)	110(48.7%)	1	1
Attended religious services	Yes	54(21.7%)	195(78.3%)	0.39(0.21-0.73)	0.55(0.25-1.22)
	No	22(41.5%)	31(58.5%)	1	1

Who pays your school fee	Family	67(23.8%)	215(76.2%)	0.38(0.15-0.96)	0.55(0.18-1.65)
	Others	9(45.0%)	11(55.0%)	1	1
Khat chewing	Yes	34(46.6%)	39(53.4%)	3.88(2.2-6.86)	1.44(0.69-3.0)
	No	42(18.3%)	187(81.7%)	1	1
Drinking alcohol	Yes	46(50.5%)	45(49.5%)	6.17(3.59-10.84)	4.06(2.06-7.99)*
	No	30(14.2%)	181(85.8%)	1	1
Cigarette smoking	Yes	17(22.4%)	19(8.4%)	3.14(1.54-6.42)	1.05(0.41-2.69)
	No	59(77.6%)	207(91.6%)	1	1
Watching Pornography	Yes	53(69.7%)	76(33.6%)	4.55(2.59-7.98)	2.78(1.45-5.3)**
	No	23(30.3%)	150(66.4%)	1	1
Peer pressure	Yes	37(38.1%)	60(61.9%)	2.625(.222-.652)	1.56(0.82-2.97)
	No	39(19.0%)	166(81.0%)	1	1

Note: COR=crude odd ratio; AOR=adjusted odd ratio; *=significant at bivariate level; **=significant at multivariate level; boarder line significant at bivariate level (p<0.2) and p<0.05 for multivariate.

Table 4: Factors associated with pre-marital sex among students of Mizan preparatory school, Bench Maji zone, SWE, 2017.

Discussion

Being adolescence age group is characterized by different risk behaviors, including risky sexual behaviors. Adolescents all over the world are sexually active, but the age at which they start sexual intercourse varies between regions and within a country, between urban and rural settings [1]. This study revealed that more than one forth (25.2%) of the respondents had premarital sexual intercourse at the time of the survey, of which 56.6% were males with the mean age of 16.13 year and the maximum age 20 year and the minimum age 12 year.

These findings were in congruent with a result obtained among Agaro high school students where 25% of study participants had premarital sex [12]. On the other hand, this finding is relatively high when compared to study done in high school adolescents in Aletawondo town with the prevalence of premarital sexual intercourse of 18.3% [13] and another study among in school youths of Shendi town was 19% [14]. This discrepancy might be due to variation in the prevalence of risky behaviors between the two study populations and the difference between study populations.

First sex among adolescents and young adults in sub Saharan Africa including Ethiopia is often unprotected [15]. Condom use during first sexual intercourse in this study is about 33(43.4%). This finding is higher than from a study result 33.6% among students of Jimma town [11]. This could be due to fact that availability of information about condom has got an impact on condom use through time.

Several case reports and population studies have shown that there is a clear association between heavy consumption of alcohol and khat with psychosis. It also contributes a lot for Initiation of sexual activity among adolescents at early age [16]. According to the result of this study students who drink alcohol were four times more likely to report and begin premarital sexual practice than that of those who did not drink alcohol (AOR=4.06, 95%CI, 2.06-7.99). The possible reason might be, drinking alcohol decrease self-control and predispose to

risky behavior such as early initiation of sexual intercourse and rape [13]. Similarly, compared to respondents who do not chew khat, those who were chewing khat were more likely to initiate premarital sex earlier. This finding was in line with other study in Jimma town [11]. The possible explanation for this association could be due to loss of track of mind induced by khat chewing which motivated them to have early sexual initiation [5].

On the other hand, students whose educational status of mother attended formal education were 0.77 time less likely to have odds of premarital sexual practice than those of not attended formal education (AOR=0.77 95% CI, 0.13-0.84). This finding is in line with study done in Sidama zone (AOR=0.81 95% CI, 1.12-2.35) [13].

In addition, those students who were watching pornography were reported premarital sexual practice than those who did not watch (AOR=2.78 95%CI, 1.45-5.3). This finding is higher than result of study done in shendi town of east Gojjam (AOR=1.74 95% CI, 1.18-2.54) [14]. This may be due to the difference in study population culture.

Limitation of the Study

Since this study touches very sensitive and very personal issues and the behavioral outcomes are based on self-reported information the possibility of reporting errors and biases cannot be ruled out and it might be subjected to recall bias.

Conclusion

A large number of school students were engaged in sexual practice before marriage. Majority of them were males. The factors associated with this were drinking alcohol, and watching pornography which are modifiable behaviors.

Recommendations

- Establish and strengthen school anti AIDS clubs and give a basic and sounding knowledge through continuous training.
- As school teachers have a better proximity to students they have an extra ordinary opportunity to provide necessary information and life-skill education in schools.
- Health sector should establish youth centers and School health interventions; so that students able to obtain necessary and adequate information about the disadvantage of alcohol drinking and watching pornography to reduce the premarital sexual practice.
- Further investigation is recommended on the association of alcohol and khat with premarital sex by providing due attention for adolescents with above characteristics.

Competing interests

The authors have declared that no competing interests exist.

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