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Risky sexual behaviors and associated factors among high school students of Dawuro Zone, South West Ethiopia

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Demekech Bedru[1], Kenneth Toby Maduako[2], Mihiretu Alemayehu[3], Asrat Chernet[4], Damene Darota[5]*

Medical Service Officer, Dawuro Zone Health Department, SNNPR, Ethiopia[1]; Consultant, Obstetrician Gynaecologist, University of Benin Teaching Hospital, Benin City, Nigeria[2]; School of Public Health, College of Medicine and Health Sciences, Wolaita Sodo University, Ethiopia[3]; School of Public Health, College of Medicine and Health Sciences, Wolaita Sodo University, Ethiopia[4]; School of Public Health, College of Medicine and Health Sciences, Wolaita Sodo University, Ethiopia[5]

***For Correspondence**: Email: *demebedru09@gmail.com*

Abstract

Risky sexual behavior still results in human health problems, especially affecting young people. So, this study aimed to determine the magnitude of risky sexual behavior and associated risk factors among high school and preparatory students in Dawro Zone, Southern Ethiopia. A total of 630 students participated in the study; making the response rate 99.5%. Among those students, 305 (48.4%) had started sexual intercourse before data collection. The mean and standard deviation of the age of study participants was 19.12 years (+SD 1.1827) respectively. Of those who started sex, 278 (91%) of them reported unsafe sexual practices. Being in the 20-25 age group (AOR=2.5, 95% CI=1.42, 4.49), having monthly pocket money (AOR=9.4, 95% CI=5.28, 16.81), rare church attendance (AOR=8.8, 95% CI=4.95, 15.73), living without families (AOR=2.37, 95% CI=1.26, 4.44), parental polygamous marriage type (AOR=5.41, 95% CI=1.55, 18.90), no access to information to unsafe sexual practice (AOR=3.60, 95% CI=2.11, 6.13) and poorly knowledgeable to unsafe sexual practice(AOR=4.59, 95% CI=2.630,8.018), were significantly associated with the unsafe sexual practice. *(Afr J Reprod Health 2022; 26[3]: 74-83).*

Keywords: Risky sexual behavior, students, Southern Ethiopia

Résumé

Les comportements sexuels à risque entraînent toujours des problèmes de santé humaine, en particulier chez les jeunes. Ainsi, cette étude visait à déterminer l'ampleur des comportements sexuels à risque et des facteurs de risque associés chez les élèves du secondaire et de la préparation dans la zone de Dawro, dans le sud de l'Éthiopie. Au total, 630 étudiants ont participé à l'étude; soit un taux de réponse de 99,5 %. Parmi ces étudiants, 305 (48,4%) avaient commencé des rapports sexuels avant la collecte des données. La moyenne et l'écart type de l'âge des participants à l'étude étaient de 19,12 ans (+SD 1,1827) respectivement. Parmi ceux qui ont commencé des rapports sexuels, 278 (91%) d'entre eux ont signalé des pratiques sexuelles à risque. Être dans la tranche d'âge 20-25 ans (AOR=2,5, IC 95%=1,42, 4,49), avoir de l'argent de poche mensuel (AOR=9,4, IC 95%=5,28, 16,81), fréquenter rarement l'église (AOR=8,8, 95% IC = 4,95, 15,73), vivant sans famille (OR = 2,37, IC à 95 % = 1,26, 4,44), type de mariage polygame parental (OR = 5,41, IC à 95 % = 1,55, 18,90), pas d'accès à l'information sur les pratiques sexuelles à risque (AOR = 3,60, IC à 95 % = 2,11, 6,13) et les pratiques sexuelles mal informées à non protégées (AOR = 4,59, IC à 95 % = 2,630, 8,018) étaient significativement associées à la pratique sexuelle à risque. *(Afr J Reprod Health 2022; 26[3]: 74-83).*

Mots-clés: Comportement sexuel à risque, etudiants, Sud Éthiopien

Introduction

Young age is a critical developmental period when many young begin to define and clarify their sexual values and start to experiment with sexual behaviors. Risky sexual behaviors affect the engaged young people's health, social, economic and psychological affairs in the way that making them fail in to unintended pregnancy and STI, social discrimination and stigma, and poor performance of students' respectively[1-2].

Students are exposed to early sexual initiation and its health related consequence like STIs/HIV due to different reasons, such as; lack of knowledge about STIs/HIV, not perceiving them to be at risk, inconsistent use of condoms, biological

factor, socio-economic status and individual characteristics[3-5].

WHO reported unsafe sex was the second among the top ten risk factors in the global burden of diseases. It is worsen in sub-Saharan Africa where many young people experience multiple sexual partnerships with ill consequences such as unwanted pregnancy, STIs and HIV/AIDS[1-2]. As many studies showed that most of these target groups are students and young people's which is mainly due to the risky sexual behavior[1].

Unwanted pregnancies among the youth and complications of induced abortions are among the important health problems in the world. Approximately 20 million abortions are performed worldwide each year of which 95% is practiced in developing countries. Young people aged 15–24 years accounted for 42% of new HIV infections and nearly 80% of them lives in Sub-Saharan Africa. In Ethiopia about 54% of pregnancies to girls < 15 years were unwanted compared to 37% for those aged 20–24 years with limited access to targeted RH care and services for youth contributes to the high burden of RH problems[2].

Inadequate knowledge, parenting practices, peer influence, substance abuse, cultural influences and the limited capacity of implementing reproductive health services & the behaviors young people adapt hinder the provision of youth friendly services[5]. They will continue to learn from one another, their behavior will depend largely on the information, skills and services. Moreover, it is crucial to understand the determinants of sexual activities among the young people in order to inform policies and programs that help to protect them[1].

High schools are institutions where many young from different elementary schools joined and expand peer network at mid adolescent level where sexual socialization, experimentation and identity building takes place which could affect sexual behavior either positively or negatively. So, more detailed, up-to date and comprehensive information at zonal level is needed as evidence base in order to develop and implement appropriate strategies for improving youth friendly service. Therefore, conducting this study would overview the bottlenecks related to sexual related problems among high school and identify the recent associated factors to be considerably strong to influence the outcome. Thus, current study aims to determine risky sexual behavior and associated factors among secondary and preparatory school students in Dawuro zone, southern Ethiopia.

Methods

Study design, period and settings

Institutional based cross-sectional study was done in the Dawuro zone from the 1st of September to the last of December 2019. Based on the central statistics agency report of 2007, the projected total population in 2020 was 684, 7202. From the total population, around 321,818 (47 %) are in the adolescent age group. At the zonal level, the majority of the population lives in rural areas and there are 49 high schools in the zone, with 45 and 2 governmental and private respectively. Health institutions in the Dawuro zone are 1 general hospital, 2 primary hospitals, 22 Health centers, 175 health posts, and other private clinics.

Population

All high school students in the Dawuro zone were target populations, and students in selected high schools were study populations.

Sample size determination for the first objective

The sample size was calculated by using the single population proportion formula with parameters of a proportion of unsafe sexual practices taken from a study done in Wolaita Zone, Boditi town was 0.61[15], Zα/2 of 95 % C.I = 1.96, d= margin of error 5 %, design effect of 1.5 and 10% non-response rate which come up with total sample size of 554.

Sample size determination for the second objective

The sample size was calculated by using various proportions of previous studies.
For this study the proportion giving the highest sample size was taken which were 633.

Sampling procedure

A multi-stage sampling method was used. First secondary and preparatory schools were identified at zonal level i.e. seventeen secondary and

preparatory schools, secondly, six schools were selected randomly and students in each school were stratified by their grade. Third, the sample size was allocated for every stratum based on proportional allocation to their size (number of students), after collection of the total number of students in each selected school from the zonal Education department (below in table 2). Then the attendance /list /of students of grades 9, 10, 11, and 12 were prepared for each school to use as a sampling frame. After random selection of sections from each grade level, students from every selected section were selected by lottery method. There were 5540 students in selected schools six high schools.

Data collection precudure

A structured questionnaire was developed from previous studies done in such a way that it includes all the relevant variables to meet the objective of the study. An English version questionnaire was translated to Amharic, then back to English to check the consistency. Lastly, the Amharic version was used for data collection. Eight diploma Nurses were involved in the data collection. Two Bachelors of Science degree (B.Sc.) holder health professionals were recruited as supervisors.

Data quality control

The data collection tool was pretested on 32 (5%) similar populations in Chida town, which 34 Km far from the actual study is setting. All data collectors and supervisors were trained for two days on the data collection process based on the guide that was developed by the principal investigator for data collectors. Confidentiality and confidence of the study subject were kept. The principal investigators and the supervisors strictly followed the overall activities for each activity on a daily basis to ensure the completeness and consistency of the questionnaire.

Data processing and analysis

Data was entered into Epi-data version 3.1and later exported to and analyzed by using SPSS version 20.0. The unsafe sexual practice was computed by combining variables such as; early initiation of sexual debut (under the age of 18 years), having more than one sexual partner, inconsistent condom use or not using a condom, and sexual intercourse with commercial sex workers (for males only) in the past 12 months. Multiple logistic regression models were used to determine the association between risky sexual behavior and different independent variables after eligibility of independent variables determined by binary logistic regression ($p<0.05$). OR with the 95% C.I. was used to determine the association between outcome and explanatory variables. The cut-off point used for statistical significance was a p-value of <0.05. Model fitness was tested by Hosmer- Lemeshow goodness of fit, by checking a p-value of >0.05 for all variables.

Results

Socio-demographic characteristics of respondents

From a sample of 633, a total of 630 respondents completed the questionnaire, which gives a response rate of 99.5%. The majority, 333 (52.9%), of respondents were males and nearly two-thirds (63.5%) of respondents were in the age group of 15-19 years old. The mean and standard deviation (SD) for the age of respondents were 19.12 years and 1.827 years, respectively (Table 3).

Individual risk related behaviors among respondents

The study revealed that 34 (5.4%) of the students used illicit substance at least once in their lifetime and they reported that they were current user of illicit substance (in the last 12 months). The prevalence among males 29 (85.3%) was higher compared to females 5(14.7%). The respondents were further asked their using frequency: 38.2% use daily, 52.9% of them used at least once a week and 8.8% of them claimed using every fifteen day. Concerning alcohol drinking habits, 59(9.4%) reported that they drank alcohol in the last 12 months. Among alcohol users, the majority (61%) were using alcoholic drinks at least once a week. Concerning alcohol drinking amount by bottle, about 94.9 respondents had drank one to six bottles at once and the remaining's had drank greater than six bottles at once. The prevalence among males 52 (88.1%) was higher compared to females 7(11.9%). The respondents watched pornographic films in last 12 months were 55 (8.7%) and all of the watchers

Table 1: Sample size calculation for the second objective of the study

No	Variables	Proportion	Sample size by using design effect(1.5)	Non-response rate	Final sample size
1.	Pornographic film watching	0.53,0.47	575	10%	633 [1]
2.	Peer pressure	0.35	525	10%	577 [2]
3.	Substance use	0.28	310	10%	341 [16]

For this study the proportion giving the highest sample size was taken which were 633.

Table 2: Number of students in each preparatory and high school in Dawuro Zone

S.no	Grade level	Gessa high school	Waka high school	Mari high school	Kechi high school	Tocha high school	Woldane high school	Total
1	9^{th}	339	462	267	154	242	384	
2	10^{th}	312	352	247	148	221	392	
3	11^{th}	197	326	128	132	120	207	
4	12^{th}	162	307	115	102	104	123	
Total		1007	1447	757	536	687	1106	5540

Sample size allocation for ever strata (grade level) in each school

were watched from daily to every fifteen day time gaps. Furthermore, 19(3%) of the study participants attended at night clubs, with majority of them being regular attendant (Table 4). The prevalence of watching pornographic film and attending night club is clear equal among both sexes.

Sexual history of respondents

Three hundred-five (48.4%) of respondents reported that they had sexual intercourse prior to the data collection period. From 305 sexually active students, the majority had at least one of the risky sexual behaviors which could predispose them to sexual and reproductive health problems. i.e. 109 (35.7%), had sexual intercourse with multiple sexual partners in the last 12 months, 26 (8.5%) of males had sex with commercial sex workers, 204 (66.9%) respondents did not use a condom, 27(26.7%) used condom inconsistently and two-third, 203 (66.6%) had started sexual intercourse before their eighteenth birthday, of those 198(97.8%) was not married. The mean age and SD of first sexual initiation were 17.05yearsold and 1.109 years old, respectively.

The most common reason cited for not using a condom was not comfortable, 67 (32.8%), followed by trust of partner, 59(28.9%) and a condom was not availed, 38 (18.6%). The main reason given by respondents to start sex was peer pressure followed by the influence of alcohol, each accounting for 29.2% and 19.3% of the reasons, respectively. Among the sexually active students who were asked if they had a history (symptoms) of STI in the last 12 months, 42 (13.8%) responded that they had the symptoms. Regarding the use of contraceptive methods other than condoms last time they had sexual intercourse, the majority, 70(51.5%) had used and the remaining 66 (48.5 %) had not to use any. Among 136 sexually active female students, 18 (13.2%) had been pregnant. Concerning the outcome of pregnancy, 12 (66.7%) ended in abortion, 4 (22.2%) gave live birth. While the rest, 2 (11.1%) gave stillbirth. Three hundred-three (99.3%) had sexual intercourse in the past twelve months (Table 5).

Knowledge of respondents towards STI/HIV/AIDS

The majority, 552(87.6%), of respondents were aware of HIV/AIDS, while 78 (12.4%) respondents reported that they have never heard of HIV/AIDS. Respondents were also asked to mention the modes of HIV transmission. The main mode of HIV transmission listed by respondents was sexual contact, followed by blood transfusion, and mother-to-child transmission, each accounting for 405(64.3%), 182 (28.9%), and 181 (28.7%), respectively. Seventy-five (11.9%) and twenty-seven (4.3%) of the respondents said that HIV can be transmitted by handshaking and by air. The majority of the students considered HIV/AIDS are curable, 179 (28.4%) and condoms can prevent STIs if used properly, 328 (52.1%). Most of the students believe that mosquitoes bite can transmit HIV /AIDS, 309 (49%).

Table 3: Socio-demographic characteristics of respondents among High School Students in Dawuro zone

Variables(N=630)	Frequency (%)
Age	
15-19	400 (63.5)
20-25	230(36.5)
Sex	
Male	333 (52.9)
Female	297 (47.1)
Residence	
Rural	294 (46.7)
Urban	336(53.3)
Marital status	
Not married	612 (97.1)
Ever married	18 (2.9)
Grade level	
9th	148(23.5)
10th	221(35.1)
11th	158(25.1)
12th	103 (16.3)
Fathers education status	
No formal education	189(30)
Primary	185(29.4)
Secondary	144(22.9)
Above secondary	112(17.8)
Mothers education status	
No formal education	344(54.6)
Primary	181(28.7)
Secondary	79(12.5)
Above secondary	26(4.1)
Fathers occupational status	
Governmental employer	203(32.2)
Farmer	298(47.3)
Merchant	119(18.9)
Others	10(1.6)
Mothers occupational status	
Governmental employer	67(10.6)
House wife	443(70.3)
Merchant	113 (17.9)
Others	7 (1.1)
Type of marriage of parents	
Monogamous	505 (80.1)
Polygamous	88 (14)
Widowed	19 (3.0)
Separated	18 (2.9)
Monthly pocket money	
Have(100-1000 birr)	342 (54.3)
Do not have	288 (45.7)
Church attendant	
Some times	247(39.2)
Always	383(60.8)
Living with	
Parents	427(67.8)
Relatives	77(12.2)
Alone	97(15.4)
Other	29(4.6)

redictors of unsafe sexual practice

By using multivariate logistic regression after; age, frequency of church attendance, parental marital status, living arrangement, and access to information to unsafe sexual practices, knowledge level, and monthly pocket money were significantly associated with unsafe sexual practices (Table 6).

Discussion

This study revealed risky sexual behavior and associated factors among secondary and preparatory school students in the Dawuro zone. The findings of this study showed that 305 (48.4%) students have had sexual intercourse prior to data collection. This sexual initiation prevalence is almost consistent with a study in Bahir Dar City, Northwest Ethiopia, which was 50.7%[2]. But greater than the study conducted in the Amhara region among Jigjiga high school students and among high School Students in Gondar City, Northwest Ethiopia which showed that (16% and 23.6 %) of respondents had sexual intercourse prior to the data collection period respectively[6-7]. This discrepancy might be due to the difference in sample size and time of the different studies. This study revealed that from 305 sexually active students, the majority of 278 (91%) had at least one of the unsafe sexual practices, which could predispose them to sexual and reproductive health problems. This is higher than a study conducted among high school students in the Addis Ababa City of Ethiopia, which showed that about72% of sexually active had at least one of the unsafe sexual practices[8]. This might be due to residence differences between participants. According to the current study, 109 (35.7%), had sexual intercourse with multiple sexual partners in the last 12 months, which was slightly higher than the study in the Amhara region among Jigjiga high school students which was 29.2%[6].

Twenty-six, 26 (8.5%) of males had sex with commercial sex workers, which was also greater than studies finding among high school young in Pawe woreda Benishangul Gumuz Region which was only 4.6% [4]. This difference might be due to different sociodemographic cultural values toward sex with a commercial sex worker. The current study found that 204 (66.9%) respondents did not use a condom, which was greater than studies

Table 4: Individual Risk Related Behaviors among Secondary and Preparatory Schools students in Dawuro Zone

Variables	Frequency (%)
Ever used alcohol(N=630)	
Yes	59(9.4)
No	571(90.6)
Monthly frequency of alcohol use(N=59)	
Daily	9(15.3)
At least once a week	36(61)
Every fifteen days per month	6(10.2)
Monthly	8(13.6)
Bottle of alcohol drink used at once(N=59)	
One to six bottle	56(94.9)
More than six bottle	3(5.1)
Ever used illicit substance (N=630)	
Yes	34(5.4)
No	596(94.6)
Monthly frequency of using illicit substance (N=34)	
Daily	13(38.2)
At least once a week	18(52.9)
Every fifteen days a month	3(8.8)
Ever watched pornographic film (N=630)	
Yes	55(8.7)
No	575(91.3)
Monthly frequency of watching pornographic film(N=55)	
Daily	17(30.9)
At least once a week	31(56.1)
Ever fifteen days a month	7(12.7)
Ever attended night club(N=630)	
Yes	19(3)
No	611(97)
Monthly frequency of attending night club(N=19)	
Every night	4(21.1)
At least once a week	10(52.6)
Every fifteen days a month	3(15.8)
Monthly	2(10.5)

among preparatory school students in the Jimma zone, which were (56.9%)[9]. Twenty-seven (26.7%) used condom inconsistently and more than half, 203 (66.6%) had started sexual intercourse before their eighteenth birthday, of those 198 (97.8%) were not married. Another study conducted in Moshi, Tanzania secondary schools indicated that from the study participants who ever had sexual intercourse; more than 80% started sexual intercourse below the age of 18 years[10].

This result is greater than the current study. This might be different due to the sociodemographic characteristics and time of the study. The mean and SD of the age of respondents were 19.12 years old and 1.827 years old, respectively. Predictors of risky sexual behavior from this study were being aged 20-25, frequency of church attendance, parental marital status, living arrangement, and access to information to unsafe sexual practices, knowledge level, and monthly pocket money. Being age group 20-25 were about three times higher than that of age group 15-19 (AOR=2.5, 95% CI=1.42, 4.49) to perform unsafe sexual practices which is consistent with study among college students in Bahir Dari city [2]. This might be due to the physical and mental maturity and risk-taking behaviors of older youth. When we compare the exposure to unsafe sexual practices of respondents, those who have monthly pocket money were about nine times exposed to unsafe sexual practices than those who have no monthly pocket with odds of (AOR=9.4, 95% CI=5.28, 16.81). This is similar to the study conducted in Addis Abeba[11]. This might be due to the reason that money is an enabling factor to behave in any practice negatively or positively.

The frequency of church attendance was one of the independent predictors of unsafe sexual

Table 5: Sexual history of respondents among Dawuro zone secondary and preparatory school students, 2019

Variables	Frequency (%)
Ever had sex	
Yes	305 (48.4)
No	325 (51.6)
Reason to start sex (N=305)	
Peer pressure	89 (29.2)
Influence of alcohol	59 (19.3)
Economic problem	25 (8.19)
Illicit substance use	34 (11.1)
Watching pornographic film	56 (18.4)
Attending night club	18 (5.9)
Other	21 (3.8)
Age at first sexual intercourse (N=305)	
<18years old	203 (66.6)
≥18years old	102 (33.3)
Mean ± SD=	17.05± 1.109
Marital status of those early started (<18yrs) (n=203)	
Not married	198 (97.8)
Ever married	5 (2.2)
Marital status of those lately started (≥18yrs) (n=102)	
Not married	89 (87.2)
Ever married	13 (12.8)
Ever used condom during sex	
Yes	101 (33.1)
No	204 (66.9)
Frequency of condom use (n=101)	
Sometime	27 (26.7)
Always during sex	74 (73.3)
Had sex with CSW (N=305)	
Yes	26 (8.5)
No	279 (91.5)
Total No. of sexual partners (N=305)	
One	196 (64.3)
≥two	109 (35.7)
Had sexual intercourse in the past 12 months (n=305)	
Yes	303 (99.3)
No	2 (0.7)
History of pregnancy in the past 12 months (n=136)	
Yes	18 (13.2)
No	118 (86.8)
Outcome of pregnancy (n=18)	
Alive birth	4 (22.2)
Induced abortion	12 (66.7)
Still birth	2 (11.1)
History of STI in the past 12 months (n=305)	
Yes	42 (13.8)
No	263 (86.2)

practices. Respondents who attend church rarely were nine times exposed to unsafe sexual practices than those who attend regularly with odds of (AOR=8.8, 95% CI=4.95, 15.73). This is agreed with study among high school students at Jimma zone, students who didn't visit a religious institution were 6.4 times more likely to be at risk than students who visited a religious institution[9]. This was due that all religions refuse premarital sex, either according to their Bible or Quran.

The respondents who live without families compared to those who live with parents do have significantly high odds of unsafe sexual practices, (AOR=2.37, 95% CI=1.26, 4.44). This is consistent with a study conducted in Jimma zone high school students[9.] This indicates that parental supervision to their offspring is a good preventive method to unsafe sexual practices. The respondents whose parental marital status was polygamous compared to those of monogamous do have significantly high

Table 6: Factors associated with risky sexual behaviors among secondary and preparatory schools students in Dawuro zone, 2020

Variables	Risky sexual behaviors Yes (%)	No n(%)	COR(95%CI)	AOR(95%CI)	p-value
Information access to risky sexual behavior					
	77	231		1.00	
Yes	228	94	7.277(5.115-10.351)	3.600(2.112-6.137)	.000
No					
Age					
15-19	179	221		1.00	
20-25	126	104	1.496(1.080-2.072)	2.527(1.422-4.492)	.002
Father education status					
Illiterate	130	58	3.420(2.378-4.919)	0.578(.290-1.151)	0.119
Educated at different grade level	175	267			
Mother education					
Not educated at all	212	132	3.333(2.398-4.633)	1.127(.592-2.146)	0.716
Educated at different grade level	93	193			
Father occupational status					
Governmental employer	57	146			
Other than governmental employer	248	179	3.549(2.472-5.094)	1.235(.621-2.458) 2.283	0.547
Mother occupational status					
Governmental employer	17	50			
Other than governmental employer	288	275	3.080(1.734-5.471)	.490(.182-1.318)	0.158
Parental marriage type					
Monogamous	198	344			
Polygamous	78	10	6.645(2.863-15.421)	5.413(1.550-18.901)	.008
Frequency of church attendance	93	290		1.00	
Regularly	212	35	.053(.035-.081)	8.828 (4.954-15.731)	.000
Rarely					
living arrangement					
with parents	138	289		1.00	
without parents	167	36	9.715(6.426-14.687)	2.371(1.264-4.448)	.007
Monthly pocket money					
Yes	237	51	18.725(12.520-28.006)	9.426(5.284-16.816)	.000
No	68	274		1.00	
Knowledgeable					
Yes	90	222		1.00	
No	215	103	5.149(3.667-7.229)	4.592 (2.630-8.018)	.000

odds of unsafe sexual practices, (AOR=5.41, 95% CI=1.55, 18.90). This is consistent with Study in Nigerian secondary school students, who found that polygamous family structures are more likely to engage in sexual activity than students from a monogamous family structure[12]. This might be due to that youth of female-headed families are less fear of mothers' command than that of the youth of male-headed families.

The odds of performing unsafe sexual practices among the respondents, those who have no access to information of unsafe sexual practices, were four times higher than counterparts. (AOR=3.60, 95% CI=2.11, 6.13). Those who have poor knowledge of unsafe sexual practices were five times at risk of unsafe sexual practices than counterparts (AOR=4.59, 95% CI=2.630, 8.018). This might be due to a lack of knowledge of unsafe sexual practices and on ways of prevention and the risk to engage in unprotected sex. This is consistent with a study among Jigjiga high school and preparatory school students who have poor

knowledge towards unsafe sexual practices were more than four times more likely to engage in unsafe sexual practices[6]. The association between alcohol drink, watching pornographic films and illicit substance use, and risky sexual behavior was disappeared in both Bivariate and multivariate analyses. The relationship between risky sexual behavior and these substances' use was strong in many kinds of literature[13]. But the absence of a relationship between these factors and sexual behavior in this study might be as a result of some users of these substances or under-reporting of the use of these substances by students.

Conclusion

This study revealed that there is risky sexual behavior among Dawuro zone secondary and preparatory students that are evidenced by the existence of multiple sexual partners, early initiation of sex, sex with commercial sex workers, and sexual practice without a condom with a non-regular partner. Sociodemographic and economic characteristics, living arrangements, monthly pocket money, access to information to risky sexual behavior, and other personal behaviors were revealed as predisposing factors for the existence of risky sexual behavior.

Limitation

- It is cross-sectional in nature and may not show the temporal relationship between the outcome variable and independent variables.
- Retrospective memory data collection method may have the chance of memory recall bias
- The study topic by itself assesses personal and sensitive issues related to sexuality which might have caused underreporting of some behaviors.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

DB was involved in proposal writing, designing, and recruitment, and training of supervisors and data collectors, analysis and write-up, and in all stages of the project implementation. She did most of the analysis and write-up of the paper. MA contributed to the designing of the methodology, reviewing the proposal and paper, and in the final approval of the paper. AC was involved in designing the project proposal, the design of questionnaires, and the final approval of the paper. DD was involved in designing the project proposal, designing questionnaires, and in the final approval of the paper. All authors read and approved the final manuscript.

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Data availability

Data are available with the corresponding author in SPSS based.

Ethical consideration

Ethical clearance was taken from the Ethical Review Committee of the College of Medicine and health sciences of Wolaita Sodo University. Furthermore, a letter of permission was obtained from the Dawuro zone education department. Consent was obtained from the study subjects whose age was 16 and above years and from parents for that age < 16 years after they were informed about objectives and procedures of the study and their right to refuse participation any time they want shall be assured. For students less than 16 years, the parental consent form was sent to parents through their kids one week prior to data collection and written parental consent was collected through the homeroom teacher for a successive five days by reminding students to bring it. No data will be shared to anyone to secure confidentiality.

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