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Risky Sexual Behaviors for HIV Infection among Female Private College Students in Nekemte Town, Western Ethiopia

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Abstract

Background: HIV/AIDS risky behavior remains a critical health concern for young women for multiple biological and socio-economic reasons. Hence, the objective of the study was to assess the level of risky sexual behaviors and associated factors among female students in private colleges in Nekemte town, western Ethiopia.

Methods: A cross-sectional study was carried out among female private college students in Nekemte town between April and May, 2014. A total of 422 female students in private colleges were randomly selected for the study. A self-administered questionnaire was used for data collection. The collected data were cleaned and analyzed using SPSS version 16. Bivariate and multivariable analyses were done to identify predictors of risky sexual behaviors.

Results: One hundred fifty six (38.4%) of the non-married (N=406) respondents had practiced sexual intercourse. Of these, 115(73.7%) were sexually active in the last 12 months. Of the total respondents who were sexually active in the last 12 months including the married one (N=131), 38(29%) reported that they had sexual intercourse with two or more partners. Among non-married females who were sexually active in the last 12 months (N=115), only 34(29.6%) reported to have used condom at their last sexual intercourse.

Urban residence (AOR=2.4, 95% CI =1.3, 4.5), income deficit (AOR= 2.8, 95 % CI=1.5, 4.0), Income source (AOR=2.5, 95% CI=2.0, 9.0) and pornographic film viewing (AOR=10.7, 95 % CI=5.1, 22.5) were significantly associated with premarital sex. Level of study (AOR =2.0, 95% CI=1.3, 3.2), marital status AOR=2.8, 95% CI 1.8, 6.6), Living arrangement (AOR= 3.295% CI=1.3, 4.5, and pornographic viewing (AOR=2.0, 95% CI=1.1, 4.3 were significantly associated with multiple sexual partners. Similarly, condom use in the last sexual intercourse among non-married female students was significantly associated with level of study (AOR= 0.2, 95 % CI= 0 .1-0.9), Knowledge of HIV prevention by consistent use of condoms (AOR=2.9, 95%CI 1.0-8.0), pornographic viewing AOR= 2.7, 95 % CI =1.0, 7.6) and alcohol drinking (AOR=5.2, 95 % CI 3.2, 7.3).

Conclusion: This study indicated that large proportions of students were engaged in risky sexual behaviors. Hence, Encouraging continuation of virginity as a cultural norm among those who have not experienced sexual intercourse and awareness creation on the importance of using condoms for each and every sexual encounter before marriage is recommended.

Keywords: Risky sexual behavior; Private college students; Nekemte town

Introduction

Although HIV/AIDS is showing a declining trend, there are still a huge number of people infected and affected by HIV worldwide. In 2010, the United Nations Aids Department estimates around 34 million people were living with HIV globally, of which about 2.7 million people were newly infected [1].

At the same time, there were an estimated 22.9 million people living with HIV/AIDS in Sub-Saharan Africa, accounting for 68% of the total HIV burden and around 1.9 million people were newly infected in 2010, which accounts for 70% of the total number of new infections globally [1]. Of this, more than half occur in women, particularly young women age 15-24 year-olds [1].

Risky sexual behavior is described as the early age of sexual debut, high levels of premarital sexual activity and high levels of sexual partners with irregular use or non-use of condoms [2,3]. HIV/AIDS risky behavior remains a critical health concern for young women due to biological and socio-demographic factors. As in many other developing countries, the primary method of HIV/AIDS transmission in Ethiopia is heterosexual intercourse [1,4]. Behavioral Change Communication remains one of the key strategies for HIV prevention and is implemented through a wide range of interventions including the key messages that promote: being sexually abstinent, delaying sexual debut, being faithful, using condoms consistently and engaging in safer sex [5]. In implementing the strategies, the Ethiopian Ministry of Education report indicates that all training institutions, colleges and universities have incorporated life-skills based HIV/AIDS education into their curricula [5]. However, several surveys in the country indicate that young people including university students continue to engage in risky sexual behaviors despite the increased level of awareness about HIV/AIDS [5,6].

Several studies suggest that higher educational attainment is positively associated with increased awareness of HIV prevention methods and can empower girls to pursue options that can keep them safe from HIV infection, while other indicate that for girls simply being enrolled in school is protective against HIV/AIDS assuming that girls who are attending school are less likely to begin having sex at an early age. However, some studies suggest that for most students, college

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represents a shift towards greater independence from home and school settings, an opportunity to form new friendships, and for several, an opportunity to experience sexual relationships [5-8]. Previous studies on risky sexual behaviors have focused on few government universities while there are also huge numbers of students in private colleges in the country. Therefore, there is a need to determine the level of risky sexual behaviors for HIV infection and associated factors among female private college students in order to identify the focus areas for interventions.

Methods

Study setting, design and population

A quantitative institution based cross-sectional study was employed to assess the risky sexual behaviors and associated factors among female students in private colleges between Aril and May, 2014. The study was conducted in western Ethiopia, Nekemte town. Nekemte town is located at 331 km away from Addis Ababa (the capital) to the west. During the study period, there were five private colleges, three public colleges and one Government University in the town. As in Government University today, there were also significant number of female students in private colleges who were attending diploma and degree program being self-sponsored for the costs of training. Overall, there were more than 2000 female students in private colleges in the town during the study period. As source population, all female students attending regular program in private colleges in the town during the study period were eligible for the study.

Sample size and sampling technique

Adequate sample size was computed using single proportion sample size calculation formula based on the assumptions: in the absence of the previous prevalence data on the population under study, and to obtain the maximum sample size, p was assumed to be 0.5. Moreover, a margin of error of 5%, a confidence interval of 95% assumed (Za/2=1.96), and 10% contingency for non-response was used. Accordingly, a sample size of 422 female students was calculated.

The study participants were selected from the source population through simple random sampling techniques. The sampling was undertaken separately for each college in the town after the number of study subjects to be selected from each college was allocated based on Probability Proportionate to Size (PPS).

Measurements

The dependent variables were risky sexual behaviors which include: the practice of pre-marital sex, sexual intercourse with two or more partners in the past 12 months and having unprotected sex in the last sexual intercourse among unmarried females who had sexual practice and unprotected sex with non-regular partners among married females. The independent variables are the socio-economic and demographic backgrounds of the respondents (including age, religion, ethnic group, previous residence, marital status and source of income); the environmental factors (including current place of living, peer pressure and exposure to substance use and pornographic audio-visuals) and knowledge and perception about HIV/AIDS.

Data collection and processing

For the purpose of data collection, an anonymous self-administered structured questionnaire was developed after reviewing relevant literature for adopting standardized questionnaires developed for behavioral surveillance including the Demographic and Health Survey questionnaire and UNAIDS behavioral surveillance survey (BSS) questionnaire [9,10].

The questionnaire was organized into three sections. The first part includes questions on socio-demographic characteristics including age, religion, ethnic group, previous residence, current living arrangements, source of income, academic class etc. The second part includes questions on the student's sexual practice including pre-marital sex, number of sexual partners in the last 12 months and use of condoms.

The data were collected in class rooms arranged for data collection where students were asked to fill by themselves the anonymous questionnaire prepared in local languages. Seven females with a minimum of diploma holder from the same age group but not the staff of the college were recruited and trained for one day as supervisors to help the participants during completing the questionnaire. The role of the supervisors was explaining the purpose of the study at the start; giving clarification on questions whenever necessary; and collect the completed questionnaires form the participants at the end. None of the respondents were given a time limit to complete the questionnaire. The questionnaire was completed by all participants within 30 minutes.

Data analysis and quality management

The collected data were cleaned and analyzed using SPSS version 16. Descriptive statistics was used to describe the percentage distribution of respondents by selected demographic characteristics and the prevalence of risky sexual practice for HIV infections. Both bivariate and multivariable logistic regression analysis was performed to measure the association between risky sexual practice and respondents' socio-economic and demographic characteristics. Odds ratio with 95% confidence interval and logistic regression was employed to describe the strength of association between the selected study variables by controlling for the effect of possible confounders. The results were expressed as crude and adjusted odds ratio relative to the reference category at statistical significance of 95% confidence intervals and P-value of <0.05. The assumptions of logistic regression were checked to be satisfied.

Operational definition

- **Risky sexual behavior**: Having unprotected sex with non-regular partners or multiple sexual partners.
- **Multiple sexual Partners**: Having sexual contact with two or more partners in the last 12 months.
- **Unprotected sex**: Non use of condoms during the last sexual intercourse with non- regular partners or multiple partners in the last 12 months.

Ethical Consideration

As far as Ethical Considerations is concerned first, ethical approval was obtained from Mettu University and a formal letter for support was taken to the respective administrative bodies of the colleges and permission was obtained from responsible bodies in each college. Before the data collection, the data collection supervisors were trained to inform participants of the purposes of the study and request participant consent in a factual and neutral manner. Then, participants were explained about the research process, the necessary information pertaining to, as well as the purpose of the study in the local language. Informed consent was asked through explaining the participant's full rights to participate or not to participate in the study and to change their decision or withdraw their informed consent given, at any stage

of the completing questionnaire without giving any reason and without any penalty. The participants were also informed that the questionnaire was made anonymous and the response is fully confidential.

Results

Socio-demographic characteristics of the study participants

All 422 (100%) selected subjects responded to the prepared questionnaire. As shown in the Table 1 below, of the study subjects 164 (38.9%) were in the age group 15-19 years and the mean age for participants was 20.16 years with standard deviation (SD) of ± 2 years. The distribution of the study subjects by ethnic group showed that the majority, 394 (93.4%) were from Oromo followed by Amhara 22(5.2%). Concerning the religion affiliation, majority 387 (91.7%) of participants were Christians (of which 273(64.7%) protestants and 114(27%) Orthodox) followed by Muslim 20(4.7%).

Of the total respondents, 280 (66.4%) came from rural areas and 308(73%) of them live in a rented houses to attend the college education. Majority 406(96.2%) of the study participants were unmarried by marital status. Regarding the income sources, 345(81%) of them reported that they were supported by family, while 30 (7.1%) were dependent on boyfriends or sexual partners. The majority 253(60%) indicated that the income they get is insufficient to cover their expenses regardless of its sources.

Three hundred twenty eight (77.7%) of the participants were attending non-health fields in the college while 94(22.3) were in health fields. Among the respondents, about one fourth (24.6%) reported that they had viewed sexual films in the past. With regard to exposure to substance use, a small proportion 13(3.3%) and 41(9.7%) of participants reported that they had chewed khat and drank alcohol in the last 12 months respectively (Table 1).

Table 1: Percentage distribution of female private college students by background characteristics of respondents, Nekemte Town, West Ethiopia, May 2014.

Variables		Number(N=422)	Percent
Age group at interview	15-19 years	164	38.9
	20-24 years	246	58.3
	> 25 years	12	2.8
Ethinic group	Oromo	394	93.4
	Amhara	22	5.2
	Tigire	2	0.5
	Gurage	4	0.9
Religion	Orthodox	114	27
	Protestant	273	64.7
	Muslem	20	4.7
	Others	15	3.6
Pre college residence	Urban	142	33.6
	Rural	280	66.4
Marital status	Married	16	3.8
	Unmarried(single)	406	96.2
Income source for educational expense	Family(Father or Mother)	345	81.8
	Relatives	28	6.6
	Boyfriends(Sex partners)	30	7.1
	Myself	17	4
	Others	2	0.5
Income sufficiency for expense	Yes	169	40
	No	253	60
living arrangements	With husband	12	2.8
	With family/Relatives	88	20.9
	In rented house alone	108	25.6
	In rented house with peers	200	47.4
	Other	14	3.3
Field of study	Health field	94	22.3
	Non health field	328	77.7
Level of study	First year	169	40
	Second year	132	31.3
	Third year	121	28.7
	Fourth year	0	0
Pornographic viewing	Yes	104	24.6
	No	318	75.4
Khat chewing in the last 12 months	Yes	13	3.1
	No	409	96.9
Alcohol drink in the last 12 months	Yes	41	9.7
	No	381	90.3

Table1: Percentage distribution of female private college students by background characteristics of respondents, Nekemte Town, West Ethiopia, May 2014.

HIV/AIDS related knowledge of participants

Majority of respondents 385(91%) and 287(68%) knew that HIV/AIDS cannot be transmitted by food sharing and mosquito bites respectively. On contrary, 134(32.2%) had misconception on HIV transmission by mosquito bites and 31(7.3%) by food sharing. In addition, 73 (17.3%) of respondents responded that HIV infected person can be known by simply looking at.

Regarding the knowledge of prevention methods, majority 361(85.5%) and 333 (78.9%) reported that sexual abstinence and being faithfulness to one uninfected partner protects from HIV infection respectively. Less than half 188(44.5%) reported that consistent condom use can prevent from HIV infection while a significant proportion 95(22.5%) did not agree to condom use to prevent HIV and 139 (32.9%) mentioned that they do not know.

Among the study participants, 253 (60.7%) reported that they had HIV test in the past and 358(84.8%) reported that they believe in the premarital VCT for HIV prevention, while a small proportion 6(1.4) do not agree and 58(13.7%) mentioned that they do not know.

Sexual history and sexual behaviors

In this study, 156 (38.4%) of the non-married (N=406) respondents reported that they had practiced sexual intercourse. Among those who had practiced sexual intercourse (N=156), 57 (36.5%) were below the age of 17 years. The mean age at first sexual intercourse was 17.86 with SD of ± 1.1 years. Majority 117(75%) of the first sex among who had practiced sexual intercourse was unwanted and 90 (57.7%) expressed that they felt regret after the first sexual practice. The major reasons reported for the initiation of the first sexual practice among those who ever practiced sexual intercourse were economic benefit, peer pressure and partner forcing in 69(44.2%), 32 (20.5%) and 25 (16%) respectively(Table 2).

Of those non-married female students who have reported to have had sexual practice, 115(73.7%) were sexually active in the last 12 months before the data collection period. Of the total respondents who were sexually active in the last 12 months including the married one (N=131), 38(29%) reported that they had sexual intercourse with two or more partners. Among those non-married females who were sexually active in the last 12 months (N=115), only 34(29.6%) reported

to have used condom at their last sexual intercourse, while the majority 81(70.4%) did not use condoms (Table 2).

Table 2: Percentage distribution of female private college students by sexual practice and condom use in the last 12 months, Nekemte town, West Ethiopia, May 2014.

Logistic Regression Analysis between Risky Sexual Behavior and Predictor Variables

Premarital sex

The results of multiple logistic regression analysis for estimating the predictors of premarital sex found that pre-college residence, income deficit, income source and pornographic film viewing were found to be significant predictors of initiating premarital sex after controlling for other variables. As indicated in the Table 3 below, being urban resident was found to be 2.4 times more likely to have premarital sex than rural resident (AOR=2.4, 95% CI =1.3-4.5). Students who were receiving income from boyfriends (partners) were 2.5 times more likely to had practiced premarital sex (AOR= 2.5, 95% CI= 2.0-9.0). In addition, those respondents who had income deficit were nearly 2.8 times more likely to have practiced premarital sex than those respondents who had sufficient income (AOR= 2.8, 95% CI=1.5, 4.0). Pornographic viewing was also found to be strongest predictor for the initiation of pre-marital sex as the logistic regression result showed respondents who viewed sexual film were 10.7 times more likely to have sexual practice before marriage than those who didn't (AOR =10.7, 95% CI= 5.1-22.5).

Multiple sexual partners

From the result of multiple logistic regression analysis multiple sexual partners among those who had sexual practice in the last 12 months was significantly associated with living arrangement, level of study, marital status, pornographic viewing, and khat chewing (P<0.05). As indicated in Table 4 below, the risk of having unprotected sex is greater in the third year students than the first year students. Students from third year were two times more likely to have multiple sexual partners than first year (AOR =2.0, 95% CI=1.3, 3.2). Similarly, marital status was significantly associated with multiple sexual partners. Unmarried students were nearly 3 times more likely to have multiple sexual partners than married (AOR= 2.8, 95% CI 1.8, 6.6). Additionally, Students who were living alone in the rented room were 3 times more likely to have multiple partners than those who were living with their family (AOR= 3.2, 95% CI 1.3, 4.5). Moreover, pornographic viewing was positively associated with having multiple sexual partners. Those who viewed pornographic film were 2 times more likely to have unprotected sex than those who did not (AOR= 2.0, 95% CI 1.1, 4.3).

Variables		Number	Percent
Sexual practice among non-married (N=406)	Yes	156	38.4
	No	250	61.6
Age group at first sex among who had sex(N=156)	15-17 years	57	36.5
	18-20 years	99	63.5
Perceived feeling after the first sex	Comfortable	21	13.5
	Regret for the action	90	57.7
	Nothing	45	28.8
Decision on the first sex	Wanted	39	25
	Unwanted	117	75
Reasons expressed for the first sex	Alcohol drink	8	5.1
	Khat chewing	7	4.5
	Economic benefit	69	44.2
	Peer pressure	32	20.5
	Partner forcing	25	16
	Love	15	9.6
Condom use at the first sex	Yes	14	9
	No	142	91
Sexual practice in the last 12 months among non-married who ever had sexual practice (N=156)	Yes	115	73.7
	No	41	26.3.
Number of partners in the last 12 months among those who had sexual practice in the past 12 months(N=131)	One	93	71
	Two	32	24.4
	Three or more	6	4.6
Condom use at the last sex among non-married who had sexual intercourse in the last 12 months (N=115)	Yes	34	29.6
	No	81	70.4

Table 2: Percentage distribution of female private college students by sexual practice and condom use in the last 12 months, Nekemte town, West Ethiopia, May 2014.

Variables		Pre-marital sex (N=406)		COR(95% CI)	AOR(95% CI)
		Yes	No		
		N (%)	N (%)		
Age group at interview	15-19 years	46(11.33)	118(29.06)	1	
	20-24 years	106 (26.1)	130(32.01)	2.4(1.5,5.4)	
	25 and above years	4(0.98)	2(0.49)	1.4(1.2,2.5)	
Pre-college residence	Urban	75(18.47)	63(15.51)	1.8(1.3,3.5)	2.4(1.3-4.5)
	Rural	81(19.95)	187(46.05)	1	1
Income source	Family Parents	120(29.55)	219(53.94)	1	1
	Relatives	7(1.72)	21(5.17)	0.6(0.1,0.8)	0.4(0.1-0.5)
	Boyfriends (sex partners)	21(5.17)	5(1.23)	3.4(1.5,5.3)	2.5(2.0-9.0)
	Myself	8(1.97)	5(1.23)	0.4(0.2,0.8)	0.4(0.1-0.9)
Income deficit	yes	140	150	2.9 (2.0, 4.1)*	2.8(1.5, 4.0)*
	No	16	100	1	1
Field of study	Health field	41(10.09)	47(11.57)	1	
	Non health field	115(28.32)	203(50)	6.3(3.2,7.4)	
Level of study	First year	50(12.31)	119(29.31)	1	
	Second year	47(11.57)	73(17.98)	4.8(3.1,8.21)	
	Third year	59(14.53)	58(14.28)	2.0(1.2,5.2)	
Pornographic viewing	yes	79(19.45)	23(5.66)	12(2.4,23.9)	10.7(5.1-22.5)
	No	77(18.96)	227(55.91)	1	1
Chewed Khat in the last 12 months	yes	11(2.70)	2(0.49)	2.1(1.4,3.5)	
	No	145(35.71)	248(61.08)	1	
Drank alcohol in the last 12 months	Yes	29(7.14)	10(2.46)	4.2(2.3,7.1)	
	No	127(31.28)	240(59.11)	1	

Table 3: Factors associated with Pre-marital sex among female college students in Nekemte town, West Ethiopia, May 2014.

Condom use

Condom use in the last sexual intercourse among non-married female students who reported to have had sex in the last 12 months was also significantly associated with level of study, Knowledge of HIV prevention by consistent use of condoms, pornographic viewing and khat chewing in the last 12 months sex (P<0.05). As shown in Table 5 below, condom use in the last sex is positively associated with the

Variables		Sexual partners in the last 12 months (N=131)		COR(95% CI)	AOR(95% CI)
		One	Two or more		
		N (%)	N (%)		
living arrangements	With family	19(14.50)	5(3.81)	1	1
	In rented house alone	35(26.71)	21(16.03)	4.0(2.2,6.7)	3.2(1.3, 4.5)*
	In rented house with peers	36(27.48)	10(7.63)	0.5(0.2,0.9)	0.7(0.2,0.8)
	Other	3(2.29)	2(1.52)	0.6(0.3,0.8)	0.2(0.1,0.7)
Level of study	First year	24(18.32)	6(4.58)	1	1
	Second year	32(24.42)	19(14.50)	4.2(2.3,5.5)	3.3(2.1,5.4)*
	Third year	37(28.24)	13(9.92)	1.8(1.2,2.4)	2.0(1.3, 3.2)
Marital status	Married	14(10.68)	9(6.8)	1	1
	Unmarried	70(60.30)	38(29.00)	1.8(1.3,3.5)	2.8(1.8, 6.6)
Knowledge of HIV prevention by being faithfulness	Yes	76(58.01)	21(16.03)	1	
	No	15(11.45)	6(4.58)	0.6(0.2,0.5)	
	Do not know	2(1.52)	11(8.39)	0.8(0.2,0.7)	
Pornographic viewing	Yes	48(36.64)	25(19.08)	3.9(1.8,7.6)	2.0(1.1, 4.3)
	No	45(34.35)	13(9.92)	1	1
Khat chewing in the last 12 months	Yes	4(3.05)	7(5.34)	3.0(1.9,4.3)	
	No	89(67.93)	31(23.66)	1	

Table 4: Factors associated with multiple sexual partners among college students in Nekemte town, West Ethiopia, May 2014.

level of study. Those respondents in the first year were less likely to use condoms compared to the second and third year students (AOR=0.2, 95% CI 0 .01-0.9). Similarly, Respondents who had belief about prevention of HIV/AIDS by consistent use of condoms were nearly 3 times more likely to use condoms (AOR= 2.9, 95%CI 1.0-8.0). In this study, respondents who viewed pornographic films were nearly 3 times more likely to have unprotected sex compared to those who didn't view the pornographic film (AOR=2.7, 95% . CI 1.0-7.6). Moreover, alcohol drinking was positively associated with condom use. Those students who did not drink alcohol in the last 12 months were 5 times more likely to use condoms than those who did drink (AOR 5.2, 95% CI 3.2, 7.3).

Table 3: Factors associated with Pre-marital sex among female college students in Nekemte town, West Ethiopia, May 2014.

Table 4: Factors associated with multiple sexual partners among college students in Nekemte town, West Ethiopia, May 2014.

Table 5: Factors associated with Condom use among college students in Nekemte town, West Ethiopia, May, 2014.

Discussion

This study tried to asses risky sexual behaviors for HIV infections and associated factors among female students in private colleges. Knowledge of how HIV is transmitted is crucial to enable people to avoid HIV infection, especially for young people, who are often at greater risk because they may have shorter relationships and thus more partners or may engage in other risky behaviors.

In this study, for the questions about misconception, 287 (68%) and 385(91%) knew that HIV cannot be transmitted by mosquito bites and by food sharing respectively. However, 134(32%) and 31(9%) had misconception on HIV transmission by mosquito bites and by food sharing respectively. The most common misconception about HIV transmission in this study is that it can be transmitted by mosquito bite which is consistent with the 2011 EDHS report. In the 2011 EDHS, only about half of women (52%) know that HIV cannot be transmitted by mosquitoes and 76% of women know that a person cannot become infected by sharing food with a person who has HIV [9].

With regard to the knowledge of HIV prevention, 361(85.5%) and 333 (78.9%) responded that sexual abstinence and being faithfulness to one uninfected partner protects from HIV infection respectively. However, only less than half 188(44.5%) reported that consistent condom use can prevent from HIV infection. The 2011 EDHS showed that about 73% of women report that people can reduce their chance of getting HIV by abstaining from sexual intercourse. Similarly, another study conducted among high school students in Bale zone revealed that 534 (64%) reported sexual abstinence protects from HIV and about 75% indicated that having one uninfected faithful partner protects them from HIV. In this regards, the finding of the present study shown a better knowledge in HIV prevention by abstinence and being faithfulness compared to the 2011 EDHS data and the study among students in Bale zone and is almost similar with study conducted in western part of Ethiopia. The variation could be as a result of the difference in time and the level of educational status [9,11,12].

In measuring the knowledge, at least two prevention methods including knowledge that people can reduce their chances of getting the AIDS virus by having sex with only one uninfected, faithful partner and by using condoms consistently are required for comprehensive knowledge. In the 2011 EDHS data, nearly half (49 percent) of female youth, age 15-24, knew that both using condoms and limiting sexual intercourse to one uninfected partner can reduce the risk of acquiring HIV. Since the present study shows that the knowledge about HIV prevention by using condoms was low, as only less than half 188 (44.5%) reported consistent condom use can prevent from HIV infection, it indicated that the level of comprehensive knowledge for HIV prevention in this study population is lower [9].

Information on sexual behaviour is important for designing and monitoring intervention programmes to control the spread of HIV/AIDS. Several studies including EDHS asked questions on the number of lifetime sexual partners and of those during the 12 months preceding the survey and the use of condoms at the last sexual encounter. In Ethiopia, HIV/AIDS prevention programmes focus their messages and efforts on three important aspects of behaviour: using condoms, limiting the number of sexual partners (or staying faithful with one uninfected, mutually faithful partner), and delaying sexual debut (abstinence) among the young and the

Variables		Condom use at the last sex (N=115)		COR(95% CI)	AOR(95% CI)
		Yes	No		
		N (%)	N (%)		
Age group at interview	15-19 years	12(10.43)	18(15.65)	1	
	20-24 years	22(19.13)	59(51.30)	2.1(1.6,4.2)	
	25 and above years	0(0)	4(3.47)	3.1(2.3,7.1)	
Pre college residence	Urban	17(14.78)	35(30.43)	3.8(2.1,6.4)	
	Rural	17(14.78)	46(40)	1	
Field of study	Health field	4(3.47)	23(20)	5.8(3,2,13.4)	
	Non health	30(26.08)	58(50.43)	1	
Level of study	First year	8(6.95)	20(17.39)	0.6(0.1,0.8)	0.2(.0 .1,0.9)
	Second year	14(12.17)	43(37.39)	2.0(1.7,5.2)	1.1(1.5,3.7)
	Third year	12(10.43)	18(15.65)	1	1
Had believe in consistent condom use to prevent HIV	Yes	17(14.78)	30(26.08)	1.7(1.3,2.0)	2.9(1.0,8.0)
	No	11(9.56)	21(18.26)	0.2(0.1,0.8)	0.6(0.4,0.9)
	Do not know	6(5.21)	30(26.08)	1	1
Pornographic viewing	Yes	24(20.86)	50(43.47)	3.0(2.1,4.3)	2.7(1.0,7.6)
	No	10(8.69)	31(26.95)	1	1
Alcohol drink in the last 12 months	Yes	6(5.21)	25(21.73)	4.7(2.3,8.2)	5.2(3.2, 7.3)
	No	28(24.34)	56(48.69)	1	1

Table 5: Factors associated with Condom use among college students in Nekemte town, West Ethiopia, May, 2014.

never-married. To ascertain whether programmes have effectively communicated at least two of these messages, respondents were prompted with specific questions about whether it is possible to reduce the chance of getting the virus that causes AIDS by having just one faithful sexual partner and by using a condom at every sexual encounter [9,13].

Young people who initiate sex at an early age face a higher risk of becoming pregnant or contracting an STI/HIV than young people who delay initiation of sexual activity. In this study, 156 (38.4%) of the non-married respondents reported that they had practiced sexual intercourse. Among those who had practiced sexual intercourse (N=156), 57 (36.5%) were below the age of 17 years and the mean age at first sexual intercourse was 17.86 with standard deviation of ± 1.1 years. The finding of this study is almost similar with the findings from studies. The 2011 EDHS data indicates that 11% of young women had had sexual intercourse before age 15 and 39% before age 18 [9,14-16].

The major reasons reported for the initiation of the first sexual encounter among those who ever practiced sexual intercourse were economic benefit, peer pressure and partner forcing in 69(44.2%), 32 (20.5%) and 25 (16%) respectively. The finding of this study on sexual intercourse for economic benefit of 44.2% is much higher than the findings of previous studies. The study in Bale zone among secondary school students reported that of those who had practiced sexual intercourse, 66 (25.6%) received money for sex and in the study among Addis Abeba university students, of those who had sex in the past 6 months, 15 (10.43%) of females mentioned that they had sex in exchange for money or gifts [11,17]. These significant differences may be explained for the school fee expected of the present study participants and the current rise in living costs that may force students to finding economic sources in expense of sexual exchange.

This is also consistent with evidences from many studies that suggest economic, social and political conditions in many developing countries create circumstances that make young people vulnerable to HIV infection. According to the evidence from epidemiological studies across the developing world, young people are not equally affected by HIV/AIDS. Rather, those who are most socially and economically disadvantaged are at highest risk [18]. Others suggested that economic deprivation leads many young women in sub-Saharan Africa in to sexual relationships with older men-sometimes known as "sugar daddies'-who provide money and other necessities, such as clothing and school supplies and fees in exchange for sex. Sexual relationship involving exchange of money or gift may place female students at greater risk of unintended pregnancies and STD's [19,20].

With regard to sexual activity in the last 12 months, of those non-married female students who have reported to have a sexual intercourse, 131 (84%) were sexually active in the last 12 months. This finding is much greater than the finding in the 2011 EDHS data that overall, 4 percent of never-married young women had sex in the past 12 months. It is also much higher when compared to the study findings in AAU students that only 54 (8.9%) of females were found to be sexually active [9,17,21].

Engaging in multiple sexual partner relationships is also another higher risk responsible for the spread of STI and HIV/AIDS. The finding of this study shown that among those who were sexually active in the last 12 months, 38(29%) reported that they had sexual intercourse with two or more partners. This is consistent with evidences from different studies (22,23,24). According to the 2008 Ethiopian Health Impact Evaluation report, the proportion of women having had two or more partners increased over six fold between 2005 and 2008 from 0.2% to 1.3%, while having had higher risk sexual intercourse doubled from 2.7% to 5.3%. The report also indicated that higher-risk sexual activity was observed among young women with secondary and above education (21% versus 1.8%) [22-24]. Similarly, from study among Addis Ababa University, out of 54 female students who reported sexual practice in the last 6 months, 19 (35.2%) had two or more sexual partners [17,25].

Despite condom use is promoted globally as an effective means of reducing sexual risk, more specifically HIV and sexually transmitted infections, the recent global report on HIV in 2011 indicates that the vast majority of people newly infected with HIV in sub-Saharan Africa are infected during unprotected sexual intercourse [1,26]. In the present study, of those respondents who reported to have had sexual intercourse in the last 12 months, only 34(19.8%) had used condom at their last sexual intercourse, while the majority 138(80.2%) of them

did not use. This finding is much lower compared to the previous study conducted in Bahir Dar university students in Ethiopia and is consistent with study conducted in Haramaya University students of Ethiopia in [22,27]. The 2008 Health Impact Evaluation report shows that among never-married young women who had sex in the past 12 month, 45.3% reported using condoms during the last sexual intercourse while the remained greater proportion (54.7%) did not use condoms. The recent data from 2011 EDHS also indicated that among those who had sex in the past year, 37% of women reported using a condom during their last sexual intercourse [6,9,24,25].

With regard to unprotected sex among those who had multiple sexual partners, the present study found that majority (84%) of respondents who had multiple sexual partners in the last 12 months didn't use condoms. According to the recent national data from 2011 Ethiopian DHS, less than half (47%) of those women who had two or more partners in the past 12 months reported using a condom at the last sexual intercourse while the remained 53 % did not use condoms [9].

As to the limitation of the study, the cross sectional nature could cause difficulty of determining the direction of association between the study variables and the associations observed could be discussed in terms of plausibility. Some sort of desirability and recall bias may not be eliminated. In addition, Communication on Sexual and Reproductive Health (SRH), sexual behaviors and attitude outcomes are sensitive and based on self-reported information, therefore some information may not be reported honestly and the possibility of underestimation cannot be ruled out. To the strengths, the response rate for the study was high (100%). Again the study used standard and validated instruments from EDHS. In addition the team used interviewers and supervisors who had past experience of data collection from their respective community. Because all these measures, the study had an extremely high response rate.

Conclusion

This study indicated that large proportions of students were engaged in multiple sexual partners and unprotected sex. In addition, majority of the study participants who have had sex in the last 12 months prior to study did not use condom at their last sexual intercourse. Various factors such as Pre-college residence, income deficit, pornographic film viewing, and believe in sexual abstinence for HIV prevention were found to be significant predictors of initiating premarital sex. Living arrangement, income sources, level of study, marital status, and knowledge of HIV prevention by being faithfulness, pornographic viewing, and khat chewing were significantly associated with multiple sexual partners. Similarly condom use in the last sexual intercourse among non-married female students who reported to have had sex in the last 12 months was also significantly associated with level of study, Knowledge of HIV prevention by consistent use of condoms, pornographic viewing , khat chewing and alcohol drink in the last 12 months sex . Hence, Encouraging continuation of virginity as a cultural norm among those who have not experienced sexual intercourse and awareness creation on the importance of using condoms for each and every sexual encounter before marriage is recommended.

Competing Interests

Authors declare that no competing interests exist.

Author's Contributions

The two authors were responsible for the design and conduct of the study. The statistical analysis, the interpretation of findings and drafting of the manuscript were done by the two authors. The authors read and approved the final content of the manuscript.

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