

Exploring Premarital Sexual Practices and Influencing Factors among Students at Harambe University, Adama, East Shewa Area, Oromia, Ethiopia

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Abstract

Background: Unprotected sexual activity exposes young people to sexually transmitted infections, including HIV/AIDS, and unwanted pregnancies. These consequences often lead to serious health, social and economic problems, such as school dropout and lack of education. Despite its importance, data on premarital sexual practices in the study area remain limited, with notable gaps in the literature.

Objective: This study aimed to evaluate premarital sexual practices and associated factors among female students at Harambe University College in Adama, East Shewa Area, Oromia, Ethiopia.

Methods: A cross-sectional study was conducted among 351 university students. Participants were selected by systematic random sampling combined with simple random sampling. Data were collected using a semi-structured self-administered questionnaire that was pre-assessed for validity. Data entry was performed using Epi-Info and exported to SPSS version 21 for analysis. Bivariate and multivariate logistic regression analyses were applied. Variables with a p-value ≤ 0.25 were introduced in the bivariate analysis in multivariate models. The associations were considered significant with a p-value < 0.05 , with odds ratios (OR) and 95% confidence intervals (CI) being calculated as measures of effect.

Results: Of the 351 female university students who participated in the study, 203 (57.8%) reported having maintained premarital sexual activity. Of these, 74 (21.1%) began sexual practice between the ages of 20 and 22. Multivariate logistic regression analysis identified several significant factors associated with premarital sex. Female Students aged 21-23 years were substantially more likely to have premarital sex (AOR = 10,889, 95% CI: 1,649-71,917), and those who had viewed pornography were markedly more likely (AOR = 12,408, 95% CI: 4,048-38,026). Peer pressure also played a significant role, with affected female students more than twice as likely to report premarital sex (AOR = 2.225, 95% CI: 1.044-4.739). Interestingly, third-year female students were less likely to have premarital sex compared to their peers (AOR = 0.37, 95% CI 0.14-0.96), and female students living in urban areas had a lower prevalence of premarital sexual practice (AOR = 0.482, 95% CI: 0.303-0.768).

Conclusion: The study demonstrated a high prevalence of premarital sexual practice among female university students. Age, exposure to pornography, peer pressure, academic course, and residence were significant factors. To address this problem, open discussions on sexual health should be encouraged and up-to-date reproductive health information provided through school education. It is recommended that reproductive health clubs be established within universities to raise awareness and reduce risky behaviours.

Keywords: Adama; Harambe; Premarital Sexual Practice; Students

Abbreviations

AGHMC: Adama General Hospital and Medical College; AHMC: Adama Hospital School of Medicine; AIDS: Acquired Immunodeficiency Syndrome; ASRH: Adolescent Sexual and Reproductive Health; CSA: Childhood Sexual Abuse; EDHS: Ethiopian Demographic and Health Survey; HIV: Human Immunodeficiency Virus; HU: Harambe University; MOH: Ministry of Health; NAHS: National Adolescent Health Strategy; PID: Pelvic Inflammatory Disease; PSI: Premarital Sex Intercourse; SPSS: Statistical Package for Social Sciences; STIs: Sexually Transmitted Infections; US: United States; WHO: World Health Organization

Introduction

Premarital sex, defined as penetrative vaginal sex before formal marriage, often involves multiple partners and increases the risk of acquiring sexually transmitted infections (STIs), including Human Immunodeficiency Virus (HIV) [1]. The World Health Organization [2] defines adolescence as the period between the ages of 10 and 19, a stage marked by physical, mental, and behavioral changes that increase vulnerability to risky behaviors [2,3]. Globally, more than one billion people are between the ages of 15 and 24, most of them living in developing countries. In Ethiopia, young people aged 15-24 make up more than 15.2 million, representing 20.6% of the population, and face numerous sexual and reproductive health risks, including sexual coercion, early marriage, polygamy, female genital mutilation, unplanned pregnancies, abortions, and STIs [4,5]. According to the 2007 Ethiopian census, this age group remains highly exposed to these risks, including HIV/AIDS [6,7]. Early sexual debut further increases susceptibility to HIV and other STIs, with premarital sexual practices among young people in school ranging from 11.8% to 23.2%. Unprotected sexual activity not only exposes young people to infections but also leads to unintended pregnancies, which can result in school dropouts, unsafe abortions, and even death [7].

Premarital sexual behavior among college students has become a growing public health concern globally, linked to STIs, unintended pregnancies, and mental health problems. The WHO emphasizes that STIs, including HIV, are among the leading causes of illness and death among young people, disproportionately affecting women [8]. In sub-Saharan Africa, premarital sexual activity is increasingly common among female university students, driven by peer pressure, inadequate sex education, cultural changes, and limited reproductive health services, all of which contribute to unsafe sexual practices [9]. Ethiopia continues to face high maternal morbidity and mortality, with adolescent pregnancies and unsafe abortions identified as major factors [6,10]. Although national policies such as the National Strategy for Adolescent Health (2016-2020) [11] seek to improve access to sexual and reproductive health services, sociocultural barriers and weak integration within universities limit their effectiveness [12].

Materials and Methods

Study area and period

The study was carried out in the city of Adama, located 99 kilometers southeast of Ethiopia's capital, Addis Ababa. Harambe University (HU) College, established in 2002 to strengthen the country's education sector, served as a place of study. Adama's main campus, located at Kebele 12, is the central core of the university and is home to the largest number of students. HU offers ten accredited degree programs and two graduate programs, providing comprehensive educational expertise in diverse fields such as Accounting and Finance, Business Administration, Management, Marketing Management, Economics, Computer Science, Veterinary, Nursing, Public Health, Pharmacy, Secretarial Studies, and Surveying. Currently, the institution enrolls more than 11,129 active students. In addition, HU offers nine Technical and Vocational Education and Training (TVET) programs accredited by the Oromia State TVET Regional Office, with an emphasis on skill development and vocational training. The university manages seven campuses in Ethiopia, including Adama Main Campus, Fitche Selale, Bale Robe, Holeta, Awash Lucy, Addis Ababa-Mexico, and the Abomsa [13] campuses.

The study was conducted from November 1 to 30, 2024. An institution-based cross-sectional design was employed, using quantitative data collection methods.

Population

The population of origin was composed entirely of female university students enrolled at Harambe University College. The study population included students who attended classes during the study period, selected through systematic random sampling.

Inclusion and exclusion criteria

Students who were attending regular education at the time of data collection were included. Students who were ill during data collection or under 18 years of age were excluded.

Sampling and sample size determination

The minimum sample size was calculated using the single population proportion formula, based on a prevalence of premarital sexual practice of 54.3% reported in a previous study conducted at the University of Debre Birhan [23], with a margin of error of 5% and a confidence interval of 95%:

$$n = \frac{Z^2 \alpha_{1/2} P (1-P)}{d^2}$$

D2

Where = Confidence level corresponding to 95% of the confidence interval, which is = 1.96.

P= The maximum expected practice

P = 0.543

d= The margin of sampling error to be tolerated.

$$n = \frac{(1.96)^2 (0.543) (1-0.543)}{(0.05)^2} = 380.9 \approx 381$$

$$(0.05)^2$$

Thus, the sample size = 381

Since the total population is less than 10,000, we have to use the following correction formula

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

Where:

Nf = New sample size

n = Original sample size

N = Total sampled population

$$= 381 / (1 + 381 / 2800)$$

$$NF = 335.38 \approx 335$$

Considering a non-response rate of 10%, the total sample size is n = 335 + 33.5 = 368.5, ≈ 369 .

The following table summarizes the comparison with other sample sizes, which will be determined from other studies with different associated factors.

Sample sizes were determined from other studies with different associated factors

Variables	AOR	% of controls exposed	% of cases with exposure	Sample size
Peer pressure	2.98	41.7	67.5	147
Age	2.13	57.9	74.6	314
Assisted videos and films	4.03	22.2	53.6	95
Drinking alcohol	2.63	33.3	56.8	174

Table 1: Sample sizes determined from other studies with different associated factors.

These figures are adopted from previous studies [14,15].

Sampling technique

The City of Adama Office of Education oversees eight private colleges. From these institutions, a representative university was selected through a simple random sampling, using a lottery method. Harambe University College was chosen as the place of study. The college enrolls approximately 2,800 students spread across eight departments, with student admissions spanning from 2021 to 2024. A systematic random sampling technique was used to select the study participants. Female students from all eight departments were included, and the calculated sample size of 369 was assigned proportionally to each department. A sampling interval (K) of 7.5, approximate to 8, was applied to identify the participants from the departments. The students' ID numbers served as a sampling framework, ensuring equal representation across the population studied [13].

Schematic presentation of the sampling procedure

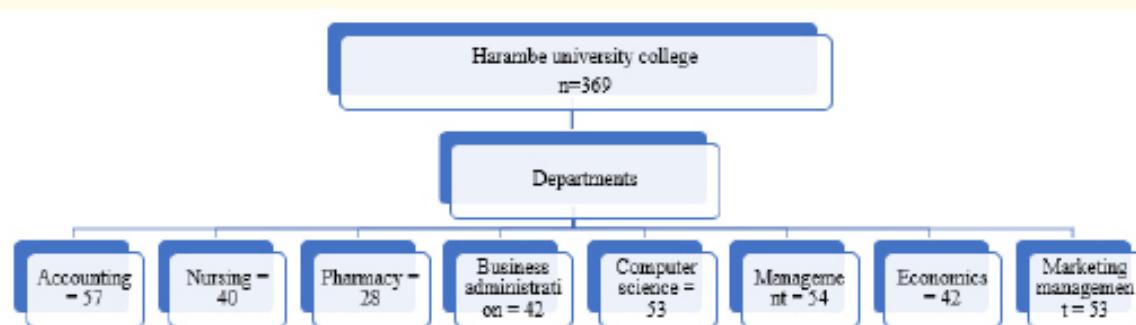


Figure 1: Schematic presentation of the sampling procedure.

Data collection tools

Data collection instrument and technique

Quantitative data were collected through a self-administered questionnaire previously and distributed in the classrooms. The instrument was evaluated for internal consistency using Cronbach's Alpha in SPSS version 21, while the validity of the content was reviewed by a language expert.

Data collectors from Adama Hospital Medical College (AHMC) were recruited, chosen for their prior experience and willingness to participate. They received a day of intensive training on the study's objectives and procedures to complete the checklist. Three science graduates, fluent in Afan-Oromo and familiar with the local culture, worked as data collectors, supported by three supervisors (a health officer and two professors). The training sessions, delivered by the principal investigator, included discussions on the objectives of the study, the content of the questionnaire, the methodology, confidentiality, and role-playing exercises.

The questionnaires were developed by the principal investigator after reviewing the relevant literature and similar studies. Drafts were sent to advisors and colleagues for feedback, and incorporated constructive feedback. The final English version was translated into Afan-Oromo by bilingual experts and then back-translated into English to ensure consistency. Pre-testing was conducted at Adama General Hospital Medical College (AGHMC) among students with similar sociodemographic characteristics, and modifications were made based on the results.

Data collection days were organised in advance with the school's principals and teachers. On those days, randomly selected students met in separate classrooms and the students completed questionnaires in different classes. The process was supervised by the principal investigator and supervisors to ensure quality.

Data processing and analysis

Data entry was performed using Epi-Info and exported to SPSS version 21 for analysis. The frequencies of premarital sexual practices were presented in tables. Chi-square tests were used to assess associations between dependent and independent variables. Bivariate and multivariate logistic regression analyses were performed, with variables showing $p \leq 0.25$ in the bivariate analysis introduced in multivariate models. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated, and significant associations were considered at $p < 0.05$.

Ethical consideration

Ethical clearance was obtained from the Department of Public Health at Adama Hospital Medical College. Formal letters were sent to school officials to ensure privacy, and respondents completed questionnaires in separate rooms. Written and verbal consent was obtained from each participant after explaining the purpose of the study, benefits, and rights. Participation was voluntary, responses anonymous and confidentiality was maintained. Health education on reproductive health issues, including STIs, HIV/AIDS and premarital sexual practices, was provided to those who requested it.

Operational definitions

- Premarital sex: Penile-vaginal penetrative sex performed at least once before formal marriage.
- Risky sexual behaviors: Sexual activity that involves not using a condom, multiple partners, or lack of fidelity.
- Safe sex: Abstinence before marriage, fidelity to the partner and constant use of condoms.
- Condom use: Correct and consistent use during sexual activity.
- Consistent use of condoms: Regular use at every sexual encounter.
- Unprotected/unsafe sex: Vaginal intercourse without the use of a condom.
- Sexually active: Student who had penetrative vaginal intercourse at least once prior to the study.
- Early sexual intercourse: Sexual activity before age 15.
- Age of sexual debut: Age at first intercourse.
- Casual sex: Sexual intercourse that occurs by chance without prior planning.

- Commercial sex partner: A partner paid in exchange for sex.
- Knowledgeable: Students can mention the three main methods of HIV/STI prevention.
- Substance: Non-medical drugs such as alcohol, khat, or cannabis.
- Substance abuse: Over-the-counter substance use.

Study variables

- **Dependent variable:** Premarital sexual practice.
- **Independent variables:** sociodemographic characteristics (age, sex, ethnicity, literacy, marital status, religion), parents' employment status, communication with parents and peers about sexuality and contraception, substance use (alcohol, khat, drugs), knowledge about HIV/AIDS, residence, and availability of pocket money.

Result

Demographic information

A total of 369 female college students were invited to participate in the survey, resulting in a complete response rate. However, 18 questionnaires (4.9%) were excluded due to incomplete information, leaving 351 valid responses for analysis. Almost half of the participants (49.3%) were between 18 and 20 years old, while 45.9% were between 21 and 23 years old. First-year students accounted for the largest proportion (25.9%) of respondents. In terms of ethnicity, the majority were Oromo (60.1%), followed by the Amhara (26.8%), Gurage (4.8%) and Wolayita (4.0%). Other sociodemographic characteristics of the respondents are presented in table 2.

Variable	Frequency	Percentage
Age		
18-20	173	49.3
21-23	161	45.9
24-26	14	4.0
27 ≥	3	.9
Year of studies		
1 st	91	25.9
2 nd	79	22.5
3 rd	85	24.2
4 th	89	25.4
5 th	7	2.0
Ethnicity		
Oromo	211	60.1
Amhara	94	26.8
Gurage	17	4.8
Wolayita	14	4.0
Others		
Silte	6	1.7
Hadiya	1	.3
Kambata	1	.3

Religion		
Orthodox	241	68.7
Islam	56	16.0
Protestants	51	14.5
Catholic	2	.6
Other		
Apostolic	1	.3
Residency		
Urban	231	65.8
Rural	120	34.2
Family Type		
Nuclear Family	214	61.0
Single-parent family	70	19.9
Extended family	67	19.1
Socioeconomic status		
Average income	166	47.3
High income	110	31.3
Low income	75	21.4

Table 2: Demographic profile of female students at Harambe University, December 2024 G.C.

Knowledge and attitudes towards premarital sex

Nearly half of female students (50.1%) reported that premarital sex is not acceptable in Ethiopian society, while about a quarter (24.5%) considered it acceptable and 25.4% were unsafe. The majority of respondents (59.0%) were aware of the risks associated with premarital sex, while 41.0% lacked such knowledge. More than half of the students (58.4%) indicated that they had received formal education on sexual and reproductive health. In terms of knowledge about contraceptives and sexually transmitted infections (STIs), 35.9% described themselves as very knowledgeable, 34.5% as somewhat informed, and 29.6% stated that they knew nothing.

Variables	Frequency	Percentage
Do you think premarital sex is acceptable in Ethiopian society?		
No	176	50.1
I'm not sure	89	25.4
Yes	86	24.5
Knowledge about the risks associated with pre-marital sex		
Yes	207	59.0
No	144	41.0
Have you received any formal education on sexual and reproductive health?		
Yes	205	58.4
No	146	41.6

Knowledge about contraception and STIs		
Very knowledgeable	126	35.9
Somewhat knowledgeable	121	34.5
I don't have any knowledge	104	29.6

Table 3: Knowledge and attitudes towards premarital sex among female students at Harambe University, December 2024 G.C.

Premarital sexual behavior

Among respondents, the majority were single (89.5%), while smaller proportions were married (5.4%) or divorced (5.1%). More than half of the students (57.8%) reported having had sexual relations before marriage. Of those, the largest group (21.1%) initiated sexual activity between the ages of 20 and 22. Emotional or romantic relationships were identified as the most common reason for having premarital sex (16.5%), followed by other factors highlighted in **table 4**.

Variables	Frequency	Percentage
Marital status		
Single	314	89.5
Married	19	5.4
Divorced	18	5.1
Have you ever had sex before marriage?		
Yes	203	57.8
No	148	42.2
At what age did you start sex before marriage?		
14-16	51	14.5
17-19	37	10.5
20-22	74	21.1
23 years or older	41	11.7
How many sexual partners have you had before getting married?		
1	89	25.4
2-3	58	16.5
4-5	27	7.7
≥ 6	29	8.3
First sexual experience		
Volunteer	89	25.4
I prefer not to answer	81	23.1
Forced	33	9.4
Variables	Frequency	Percentage
Emotional or romantic relationship	58	16.5
Economic reasons	43	12.3
Peer pressure	19	5.4
Looking for pleasure	17	4.8
Peers pressure, curiosity, and emotional or romantic relationships	13	3.7

Curiosity	5	1.4
Curiosity and emotional or romantic relationship	5	1.4
Peer pressure, curiosity, and pleasure-seeking in an emotional or romantic relationship	4	1.1
Peer pressure, emotional or romantic relationships, and economic reasons	4	1.1
Peer pressure and pleasure-seeking	4	1.1
Peer pressure, pleasure-seeking, and economic reasons	4	1.1
Peer pressure, curiosity, pleasure-seeking	3	.9
Peer pressure, curiosity, pleasure-seeking, and economic reasons	3	.9
Peer pressure and economic reasons	3	.9
Economic reasons, pleasure-seeking, and emotional or romantic relationships	2	.6
Peer pressure, curiosity, emotional or romantic relationships, and economic reasons	2	.6
Peer pressure and emotional or romantic relationships	2	.6
Pleasure-seeking and economic reasons	2	.6
Curiosity, Pleasure-Seeking, and Economic Reasons	1	.3
Emotional or romantic relationship, seeking pleasure	1	.3
Emotional or romantic relationships, pleasure-seeking, or financial reasons	1	.3
	1	.3
Curiosity about peer pressure	1	.3
Peer pressure, curiosity and economic reasons	1	.3
Peer pressure, curiosity, emotional or romantic relationships, pleasure-seeking, and financial reasons	1	.3
Peer pressure, emotional or romantic relationship, pleasure seeking	1	.3
Peer pressure, pleasure-seeking, and curiosity	1	.3
Looking for pleasure, an emotional or romantic relationship, or curiosity	1	.3
Other		
Lack of knowledge	1	.3

Table 4: Premarital sexual behavior among students at Harambe University, December 2024 G.C.

Factors associated with premarital sex

The students were asked about various influences related to sexual activity. The majority (67.8%) reported that they had not been influenced by friends or peers, while 32.1% acknowledged the influence of their peers. Approximately one-third (33.0%) of respondents had access to mobile phones or the internet, which could expose them to sexual content. More than half (54.1%) indicated that they had seen pornography, with different levels of frequency. The majority of students (72.1%) stated that they did not feel pressured by friends to have sex, although 27.9% reported experiencing such pressure. In addition, one-third (33.3%) had been in an intimate or romantic relationship in which sex was expected or encouraged. Other contributing factors are presented in table 5.

Variables	Frequency	Percentage
Have you ever been influenced by friends or peers to have sex?		
No	238	67.8
Yes	113	32.1
Do you have access to mobile phones or the internet, which could expose you to sexual content?		
No	235	67.0
Yes	116	33.0
Have you ever seen pornography?		
Yes	190	54.1
No	161	45.9
How often have you watched pornography?		
Every day	85	24.2
Occasionally	59	16.8
Weekly	46	13.1
How often do you participate in social activities with your peers?		
Never	141	40.2
Frequently	93	26.5
Occasionally	61	17.4
Rarely	56	16.0
Do you feel pressure from your friends to have sex?		
No	253	72.1
Yes	98	27.9
Have you ever been in an intimate or romantic relationship where sex was expected or encouraged?		
No	234	66.7
Yes	117	33.3
Do you think that having financial independence has contributed to your decision to have sex before marriage?		
No	241	68.7
Yes	110	31.3
Do you think cultural or religious beliefs have influenced your decision to maintain or avoid premarital sex?		
No, it is not influenced	146	41.6
Yes, very influenced	125	35.6
Yes, somewhat influenced	80	22.8
Would you say that your self-esteem influences your sexual decisions?		
Yes, absolutely	163	46.4
No influence	143	40.7
Yes, negative	45	12.8

Table 5: Risk factors associated with premarital sex among female students at Harambe University, December 2024 G.C.

Contraceptive use and sexual health

Among the women surveyed who reported having premarital sex, 31.9% indicated that they sometimes used contraceptives, while only 10.0% reported constant use; most did not use contraceptives at all. More than half of the participants (53.8%) expressed feeling comfortable talking about sexual health with a health professional. However, a significant proportion (62.7%) had never been tested for sexually transmitted infections. Additional details are presented in table 6.

Variables	Frequency	Percentage
Do you use birth control during sexual activity?		
Sometimes	112	31.9
Never	56	16.0
Always	35	10.0
What types of birth control do you use?		
I don't use contraceptives	47	13.4
Natural Family Planning	42	12.0
Condoms, birth control pills, and natural family planning	22	6.3
Injectable contraception	20	5.7
Condoms	18	5.1
Birth control pills	12	3.4
IUD	12	3.4
Condoms and birth control pills	11	3.1
Condoms and Natural Family Planning	5	1.4
Birth control pills and condoms	3	.9
Condoms, birth control pills, and injectable contraceptives	3	.9
Condoms and injectable contraceptives	2	.6
Injectable contraceptives and condoms	2	.6
Condoms, injectable contraceptives and birth control pills	1	.3
Implants	1	.3
IUDs and injectable contraceptives	1	.3
Natural family planning, birth control pills, and condoms	1	.3
Do you feel comfortable discussing sexual health with a healthcare professional?		
Yes	189	53.8
No	162	46.2
Have you ever been tested for STIs?		
No	220	62.7
Yes	76	21.7
I'm not sure	55	15.7

Table 6: Contraceptive use and sexual health among students at Harambe University, December 2024 G.C.

Risk factors for premarital sexual practice

Bivariate analysis revealed that age, year of study, place of residence, exposure to pornography, and peer pressure were significantly associated with premarital sexual practice at a 95% confidence interval and p-values less than 0.25.

Multivariate analysis also identified specific predictors. Female students aged 21-23 years were 10.9 times more likely to have premarital sex compared to older age groups (AOR = 10,889, 95% CI: 1,649-71,917). Similarly, those who had viewed pornography were 12.4 times more likely to report premarital sexual activity (AOR = 12,408, 95% CI: 4,048-38,026). Peer pressure also showed a significant effect, with students under the influence being 2.2 times more likely to have premarital sex (AOR = 2.225, 95% CI: 1.044-4.739).

In contrast, juniors were less likely to have premarital sex (AOR = 0.377, 95% CI 0.148-0.962). Residence was also a significant factor, as urban students were less likely to report premarital sexual practices compared to rural students (AOR = 0.482, 95% CI: 0.303-0.768).

This analysis highlights that age, pornography exposure, peer influence, academic year, and residence are key determinants of premarital sexual behavior among female students.

Variables	Categories	Premarital sexual practice		COR (95% CI)	AOR (95% CI)
		Yes	No		
Age	18-20	93	80	1.270 (.823,1.96)	1.906 (.959, 3.789)
	21-23	96	65	5.161 (1.122,23.752) *	10.889 (1.649, 71.917) *
	24-26	12	2	1.720 (.153,19.328)	1.804 (.064, 50.498)
	27 ≥	2	1	1	1
Year of studies	1 st year	51	40	1.910 (1.009,3.614) *	1.228 (.535, 2.818)
	2 nd year	56	23	.634(.350,1.150)	.448 (.196, 1.025)
	3 rd year	38	47	1.102(.611, 1.990)	.377 (.148, .962) *
	4 th year	52	37	4.706(.544, 40.687)	2.603 (.224, 30.193)
	5 th year	6	1	1	1
Residency	Rural	83	37	1	1
	Urban	120	111	.482 (.303, .768)	.482 (.303, .768) *
Have you ever seen pornography?	Yes	155	35	10.426 (6.333, 17.164) *	12.408 (4.048, 38.026) *
	No	113	48	1	1
Peer pressure	Yes	76	22	3.427 (2.008, 5.850) *	2.225 (1.044, 4.739) *
	No	127	126	1	1

Table 7: Factors associated with premarital sexual practice among female students at Harambe University, Oromia, December 2024 G.C.

N.B. *Indicates a P-value less than 0.05, 1 indicates the reference group.

Discussion

This study was conducted with a representative sample of students from Harambe University in Adama, East Shewa, Oromia Regional State, to assess premarital sexual practices and the factors that contribute to such behaviors. A total of 351 students participated, with almost half of them between 18 and 20 years old (49.3%) and another 45.9% between 21 and 23 years old. The majority were first-year students (25.9%), followed by second-year (22.5%) and third-year (24.2%) students. The majority of respondents (65.8%) reported living in urban areas.

The overall prevalence of premarital sex among the study population was 57.8%. This prevalence is lower than in the United States, where nearly 80% of female students reported having premarital sex [16]. The large discrepancy can be attributed to socio-cultural and demographic differences between populations. In contrast, the prevalence observed in this study is higher than that reported among young women in sub-Saharan Africa, where 39.4% of premarital sex was estimated [17].

Several Ethiopian studies have reported lower prevalence rates. Fikree, *et al.* (2012) found that 24.2% of female university students in Addis Ababa had had sex before marriage [18]. Similarly, Tsegaye., *et al.* (2018) reported a prevalence of 28.6% among female students in Gondar, with urban students showing higher rates than their rural counterparts [19]. Abeya., *et al.* (2012) documented a prevalence of 36.4% in southern Ethiopia, noting that economic independence and access to mobile phones were associated with an increased likelihood of premarital sexual activity [20]. In contrast, Shitu., *et al.* (2023), using data from the Ethiopian Demographic and Health Survey (EDHS), reported a much lower prevalence of 10.8% [21]. A systematic review and meta-analysis by Damtie., *et al.* (2022) [22], which synthesized 32 studies, estimated the combined prevalence of premarital sex among young Ethiopians at 33.59% [10]. These variations may reflect differences in study settings, time periods, and topic sensitivity across populations.

Comparable findings were reported by Mohammed., *et al.* (2017) at the University of Debre Birhan, where 54.3% of students reported premarital sexual practice, with a mean age of sexual debut of 18.7 years [23]. This result is closely aligned with the current study.

In terms of associated factors, this study found that students aged 21-23 years were significantly more likely to have premarital sex, 10.9 times more likely than other age groups (AOR = 10,889, 95% CI: 1,649-71,917). Viewing pornography was also strongly associated with students who had exposure, who were 12.4 times more likely to have premarital sex (AOR = 12,408, 95% CI: 4,048-38,026). Interestingly, juniors were less likely to report premarital sex (AOR = 0.377, 95% CI: 0.148-0.962). Peer pressure was another significant factor, with affected students 2.2 times more likely to have premarital sex (AOR = 2.225, 95% CI: 1.044-4.739). This finding is consistent with Tsegaye., *et al.* (2018), who noted that female students influenced by their peers were more likely to engage in similar behaviors [19].

Residence also played a role, as urban students were less likely to have premarital sex compared to rural students (AOR = 0.482, 95% CI 0.303-0.768). This is in contrast to traditional norms in rural and religious communities, which often advise against premarital sex, although increased urbanization and exposure to global media appear to be eroding these values [10].

Overall, the findings highlight that age, pornography exposure, peer influence, academic year, and residence are significant determinants of premarital sexual practice among female students at HU. These results underscore the importance of targeted interventions that address both individual and contextual factors that influence sexual behavior.

Conclusion

This study among female students at Harambe University revealed that premarital sexual practice is a common experience, with more than half of respondents reporting engagement. Attitudes toward premarital sex were divided, with some considering it unacceptable, others accepting it, and a notable proportion uncertain. Although many students reported awareness of the risks and had received sexual and reproductive health education, consistent contraceptive use was very low, and most had never undergone STI testing. Emotional relationships were the most frequently cited reason for sexual initiation, while social and cultural influences also played a role.

Overall, the findings provide a clear picture of the current situation, showing gaps between knowledge and practice and highlighting the influence of societal norms, access to information, and personal relationships on sexual behavior. This study contributes to understanding the realities faced by young women in Ethiopian universities. It highlights the importance of ongoing research to capture evolving trends and contextual factors that shape sexual health.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this study.

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