

# Premarital Sexual Practice and Associated Factors among Female Students in Debre Markos University, Northwest Ethiopia

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**Abstract: Background:** Young people in Sub-Saharan Africa frequently were engaged in pre-marital sex with consequences such as unplanned pregnancy, Sexually Transmitted Infections such as human immune virus/acquired immune deficiency virus more commonly faced. University life for many students is characterized by more independence and opportunities for social mixing than before. The situation is aggravated by the overall poor socioeconomic, environment, harmful traditional practice, low contraceptive use, and voluntary counseling and testing utilization. **Objective:** To assess the prevalence, associated factors, and consequences of premarital sex among regular undergraduate female students at Debre Markos University. **Methods:** An institutional-based cross-sectional study design with a multistage sampling technique was applied to select study participants and the data was collected using pretested, and self-administered questionnaires. EPI data 4.2 was used for data entry and the analysis was made using SPSS version 23. Frequency distribution, charts, figures, and tables were used to present the descriptive statistics and associated factors were identified by multivariable logistic regression. **Result:** This study revealed that 30.4% of the study participants experienced premarital sex. The mean age at first sexual intercourse was 20.9 ±0.15 years. Variables such as monthly income, participation in health-related clubs, year of study, substance use, alcohol drinking, and communication with peers about sexual health were significantly associated. **Conclusion:** The study reflected that there is a high prevalence of pre-marital sexual practices which is associated with monthly income, participation in health-related clubs, year of study, substance use, alcohol drinking, and communication with peers.

**Keywords:** Premarital Sex, Debre Markos University, Ethiopia.

## INTRODUCTION

Pre-marital sex is any sexual activity with an opposite-sex partner or with a same-sex partner before he/she has started a marriage life (1). Since people engaged in such sexual practice may have sex with many sexual partners, they are at risk of acquiring STIs including HIV, and experiencing other bad consequences of premarital sex. Younger people always face strong social, peer, and cultural pressure to participate in premarital sex at an early age. There are 1.2 billion adolescents and 1.7 billion young people in the world today of which 85% of them live in developing countries (2,3). For many students, university life is characterized by more independence and opportunities for social mixing than before which makes them vulnerable to engaging in premarital sex (4)(5). From family context adolescents living in single-parent families or with stepparents initiates sexual activity earlier than those in two-parent families (6).

Although premarital sex is universally acceptable in modern society, it has the potential to bring about problems that are either unknown or often simply ignored by members of society (7). The World Health Organization has reported that young people aged 15-24 accounted for an estimated 45% of new HIV infections worldwide (8). The youth age group is the period when sexual maturity occurs, however, the majority of them lack enough knowledge about STI and reproductive health issues. Consequently, youths have multiple reproductive problems like unwanted

pregnancy, abortion, HIV/AIDS and other STIs, a dropout from school, and poor academic performance (9, 10, 11, 12, 13, 14).

Pre-marital sex is common in Ethiopia as evidenced by one-sixth of female youths nationally and nearly one-fourth of female youths among university students practicing it (9,15). Related to their pre-marital sexual activities, youths in Ethiopia are exposed to various risks such as unprotected sex, early pregnancy, unsafe abortion, STIs, HIV/AIDS, unemployment, drug abuse, and crime (16).

University students are the most vulnerable group to HIV due to their inclination to be engaged in risky sexual activities (17). The majority of Ethiopian university officials have not yet given attention to the sexual and reproductive health of students and have little experience in implementing HIV and STI prevention programs (18). Urban residence, substance and alcohol use, seniority of students, and lack of information on sexual health are the possible triggering factors of pre-marital sex (19, 20, 21). Adolescent feelings of closeness and connectedness to parents, parental disapproval of sex, and preventive peer influences delay premarital sex (22).

## METHODS

### *Study Design, Area and Period*

An institutional based Cross-sectional study design was employed to study the magnitude of premarital sex at Debre Markos University, which is one of the 44 governmental Universities in Ethiopia located in the East Gojjam Zone of Amhara regional state Northwest Ethiopia, around 299 KM from Addis Ababa, the capital

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city of Ethiopia, and 265 KM from Bahir Dar, the capital city of Amhara region. During the study period, the University had a total of 4226 regular female students.

### **Study Population**

The study populations for this study were all regular undergraduate female students in Debre Markos University who were not transferred from other universities in the second semester.

### **Sampling Method and Procedure**

The sample size of the study was determined by using the single population proportion formula, with a P-value of 25.7% from a study conducted at Ambo university (9) by considering a 95% confidence interval, margin of error of 5% ( $d = 0.05$ ). Applying the above formula:  $n = (z_{\alpha/2})^2 p (1-p) / d^2 = (1.96)^2 0.257(1-0.257) / (0.05)^2 = 293$ . The final sample size was calculated to be 645 by considering the design effect of 2 and 10% contingency for the non-response rate.

To obtain a representative sample, a multi-stage with a simple random sampling technique was applied to select study participants from the source population. First, a list of colleges was established then departments were randomly selected using a lottery method from the respective colleges. Finally, respondents were randomly selected from respective departments using a simple random technique.

### **Data Collection Tool and Procedure**

Semi-structured self-administered questionnaire in Amharic language containing socio-demographic, institutional and economic, behavioral-related, family and peer-related, and sexual history-related questions was used to collect data. The questionnaire was prepared first in English than in Amharic and translated back to English to check its consistency. The data were collected by four trained BSc Midwives. After identifying eligible participants for the study, the questionnaire was distributed by the data collectors for each participant to be filled individually and later collected back after completion. The data collectors were available to provide clarification for data collectors for any ambiguity during data collection.

### **Data Quality Assurance**

The quality of data were ensured through proper training of data collectors and pretesting of the questionnaire. All collected data were checked for completeness, accuracy, and consistency by the principal investigators every day.

### **Data Processing and Analysis**

After checking for completeness and consistency, the data were entered into EpiData 4.2 and then exported to SPSS version 20 for analysis. Descriptive statistics were used to determine the magnitude of premarital sex and to describe the participants in terms of socio-demographic, behavioral, institutional, economic, family, and peer-related characteristics.

The research was conducted from March 30 to April 29, 2018.

Bivariable analysis was done for all independent and dependent variables one by one using binary logistic regression to see their association. Finally, multivariable logistic regression was used to identify variables significantly associated with premarital sex practice.

### **Ethical Consideration**

The ethical clearance was obtained from the Debre Markos University College of health sciences ethical review board. All of the study participants were informed about the purpose of the study and finally, their written consent was obtained before data collection. The respondents were notified that they have the right to refuse or terminate at any point of the data collection. The information provided by each respondent was kept confidential.

## **RESULTS**

### **Socio-Demographic Characteristics**

Of the intended 645 study participants a total of 595 students participated in the study making the response rate 92.3%. The mean age of the students was 22.5 with a standard deviation of 2.2. Nearly half of the participants (53.3%) are Orthodox Christianity religion followers and the majority (48.7%) of the students were Amhara in their ethnicity. Nearly one-tenth (9.1%) of the respondents were currently married. In terms of their year of study, first-year students account for 28.2%, and fifth-year students account for 6.4% (Table 1).

### **Economic, Personal, family, and peer-related characteristics**

Among the respondent around three-fourths (72.3%) of them were receiving monthly income <500 birr. Only 172(28.9%) respondents had gotten training about reproductive health. More than three-fourths (77.6%) of the respondents were not participating in health-related clubs. Only 129 (21.7%) students were communicating with their families about sexual health. Less than half (46.6) of participants reported communication with their peers about sexual health. 46.7% of respondents had peers who were practicing premarital sex. Regarding substance use, 72(12.1%) had a history of substance use, of which 63.9% were khat users. Nearly a quarter (23%) of participants were alcohol users. 7.1% and 12.9% of respondents were using pornographic movies and going to a nightclub as recreational mechanisms respectively. Concerning sexual history, 69.6% of the total participants had a boyfriend and nearly one-third of the participants practiced premarital sex of which nearly half (52.5%) started practicing premarital sex in the age range of 20-23. Of the participants who practiced premarital sex, 68% of the participants started premarital sex after joining university and 60.2% were practicing premarital sex with a single boyfriend. Sixty-nine (38.1%) premarital sex practiced participants experienced bad consequences (Table 2).

**Table 1:** Socio-demographic characteristics of DMU undergraduate female students, DMU, Northwest, Ethiopia, March 2018 (N=195).

| Variable                         | Categories of Variables | Frequency | Percent |
|----------------------------------|-------------------------|-----------|---------|
| Age                              | 19-21                   | 283       | 47.6    |
|                                  | 22-24                   | 281       | 47.2    |
|                                  | >24                     | 31        | 5.2     |
| Marital status                   | Unmarried               | 541       | 90.9    |
|                                  | Married                 | 54        | 9.1     |
| Religion                         | Orthodox                | 317       | 53.3    |
|                                  | Muslim                  | 203       | 34.     |
|                                  | Catholics               | 25        | 4.2     |
|                                  | Protestant              | 50        | 8.4     |
| Ethnicity                        | Amhara                  | 290       | 48.7    |
|                                  | Oromia                  | 209       | 35.1    |
|                                  | Tigray                  | 52        | 8.7     |
|                                  | Gumiz                   | 44        | 7.4     |
| Educational status of the father | No formal schooling     | 318       | 53.4    |
|                                  | Primary education       | 124       | 20.8    |
|                                  | Secondary education     | 59        | 9.9     |
|                                  | College or university   | 94        | 15.8    |
| Educational status of the mother | No formal schooling     | 378       | 63.5    |
|                                  | Primary education       | 111       | 18.7    |
|                                  | Secondary education     | 66        | 11.1    |
|                                  | College or university   | 40        | 6.7     |
| Parents place of residence       | Rural                   | 422       | 70.9    |
|                                  | Urban                   | 173       | 29.1    |
| Family occupation                | Farmer                  | 428       | 71.9    |
|                                  | merchant                | 109       | 18.3    |
|                                  | civil servant           | 58        | 9.7     |
| Year of study                    | 1 <sup>st</sup> year    | 168       | 28.2    |
|                                  | 2 <sup>nd</sup> year    | 174       | 29.2    |
|                                  | 3 <sup>rd</sup> year    | 166       | 27.9    |
|                                  | 4 <sup>th</sup> year    | 49        | 8.2     |
|                                  | 5 <sup>th</sup> year    | 38        | 6.4     |

**Table 2:** Economic, personal, family and peer related characteristics of DMU undergraduate female students, Northwest, Ethiopia, March 2018 (N=595).

| Variables                           | Variables Category | Frequency | Percent |
|-------------------------------------|--------------------|-----------|---------|
| Pocket money per month              | <500               | 430       | 72.3    |
|                                     | 500-100            | 131       | 22.0    |
|                                     | >1000              | 34        | 5.7     |
| Training about reproductive health  | No                 | 423       | 71.1    |
|                                     | Yes                | 172       | 28.9    |
| Participate in health-related clubs | No                 | 462       | 77.6    |
|                                     | Yes                | 133       | 22.4    |

|   |                              |     |      |
|---|------------------------------|-----|------|
| Source of food service                        | Café                         | 515 | 86.6 |
|   | Non-café                     | 80  | 13.4 |
| communication with family about sexual health | No                           | 466 | 78.3 |
|   | Yes                          | 129 | 21.7 |
| Communication with peers about sexual health  | No                           | 318 | 53.4 |
|   | Yes                          | 277 | 46.6 |
| Sexually experienced peers before marriage    | No                           | 317 | 53.3 |
|   | Yes                          | 278 | 46.7 |
| Ever had substance use                        | No                           | 523 | 87.9 |
|   | Yes                          | 72  | 12.1 |
| Type of substance                             | Chat                         | 46  | 63.9 |
|   | Cigarette                    | 21  | 29.2 |
|   | shisha                       | 5   | 6.9  |
| Ever had alcohol drinking                     | No                           | 458 | 77.0 |
|   | Yes                          | 137 | 23.0 |
| Recreational mechanisms                       | watching pornographic movies | 42  | 7.1  |
|   | go to night clubs            | 77  | 12.9 |
|   | other mechanisms             | 476 | 80.0 |
| Ever had boy friend                           | No                           | 421 | 70.8 |
|   | Yes                          | 17  | 29.2 |
| First premarital sexual timing                | Before joining university    | 58  | 32.0 |
|   | After joining university     | 123 | 68.0 |
| Sexual relations                              | with single boy friend       | 109 | 60.2 |
|   | with more than one partner   | 35  | 19.3 |
|   | transactional                | 37  | 20.4 |
| Age of first premarital sex                   | <20                          | 71  | 39.2 |
|   | 20-23                        | 95  | 52.5 |
|   | >23                          | 15  | 8.3  |
| Ever had face problem                         | No                           | 112 | 61.9 |
|   | Yes                          | 69  | 38.1 |

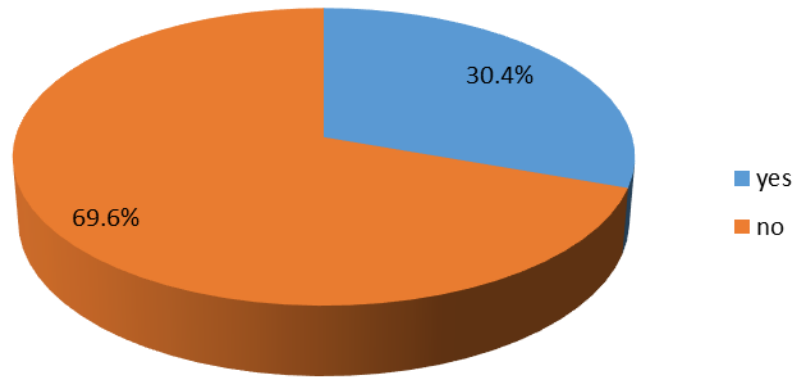
### **Premarital Sexual Practice**

Overall, of the total participants of this study, 30.4% reported ever practicing premarital sex (Figure 1). The main reason mentioned for experiencing premarital sex was falling in love which accounts for 32% and peer pressure accounts for the least contribution to premarital sex (8.3%) (Figure 2). Concerning consequences of premarital sex, 27. % have faced poor academic performance and 5.4% acquired HIV/AIDS (Figure 3).

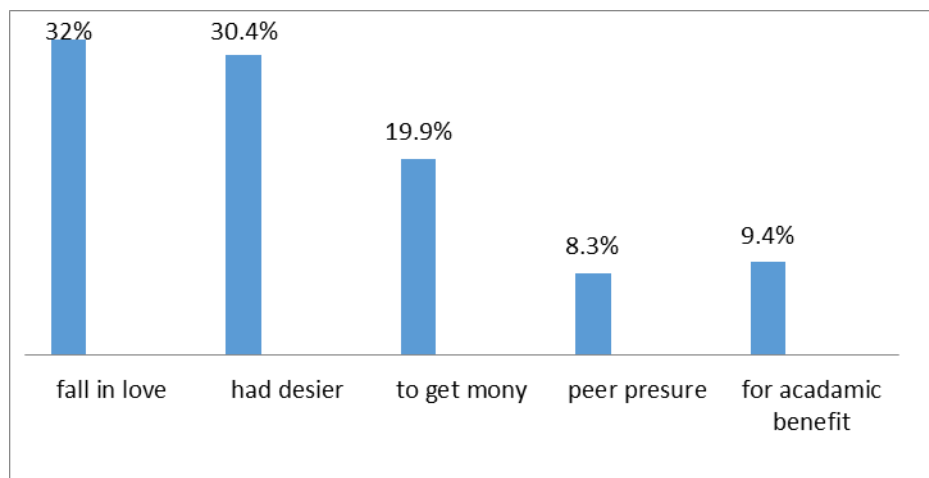
### **Associated Factors of Premarital Sex**

On multivariate logistic regression participating in health-related clubs, year of study, substance use, alcohol use, discussion about sexual health with peers and monthly income showed significant association with premarital sexual practice. Students who were not participating in health-related clubs practiced premarital sex three times more likely as compared to students who participated (AOR=3.286, CI 1.556-6.938). Regarding with year of study those 2nd years, 3rd year,

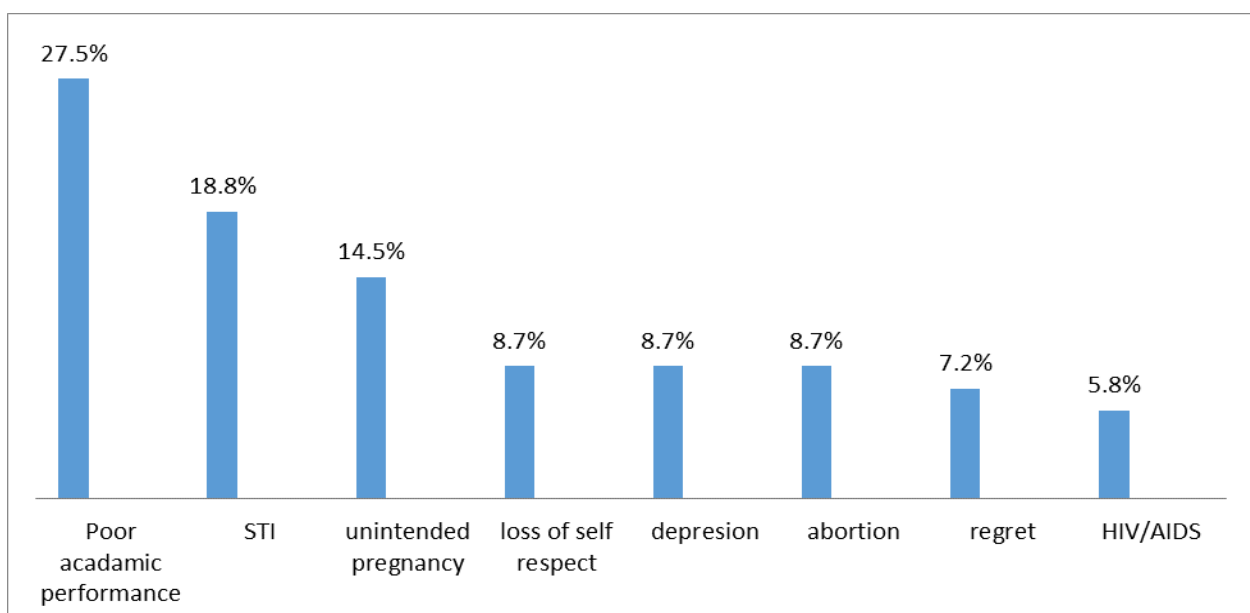
4th, and 5th-year students practiced premarital sex more likely than 1st-year students (AOR= 4.209, CI 1.893-9.357), (AOR = 5.574, CI 2.495-12.450), (AOR=4.349, CI 1.311-14.43) and (AOR=29.908, CI 6.904-129.57) respectively. Students who were drinking alcohol were nearly five times more likely to practice premarital sex than those who were not drinking alcohol (AOR=4.586, CI 2.504-8.398). Regarding substance use students who were using substances were nearly 12 times more likely to practice premarital sex than non-users (AOR=0.085, CI 0.034-0.213). On another hand, students who did not discuss reproductive health with peers were nearly 9 times more likely to practice premarital sex than students who were discussed (AOR =8.707, CI 4.508-16.816). In the context of monthly income, students who were receiving a monthly income of <500 practiced premarital sex 17% (AOR= 0.83, CI 0.022-0.318) were less likely and students who were receiving a monthly income of 500-1000 birr practice premarital sex 80% (AOR=0.20, 95% CI 0.053-0.728) less likely times less likely as compared to students who were receiving more than 1000 birr (Table 3).



**Figure 1:** The proportion of premarital sexual practice among DMU undergraduate female students, Northwest, Ethiopia, March 2018 (N=595).



**Figure 2:** Reasons to have first sex for DMU undergraduate female students by percent, Northwest, Ethiopia, March 2018



(N=181).

**Figure 3:** Consequences of pre-marital sex among DMU undergraduate female students by percent, Northwest, Ethiopia, March 2018.

**Table 3:** Factors associated with premarital sex at multivariate analysis among DMU undergraduate female students, Northwest, Ethiopia, March 2018(N=595).

| Variables                                   | Categories           | Pre-marital sex |     | COR    | AOR    | CI          | P- Value |
|---|----------------------|-----------------|-----|--------|--------|-------------|----------|
|   |                      | Yes             | No  |        |        |             |          |
| Participation in health-related clubs       | No                   | 159             | 303 | 2.648  | 3.286  | 1.56-6.94   | 0.002    |
|   | Yes                  | 22              | 111 | 1      | 1      | 1           | 1        |
| Year of study                               | 1 <sup>st</sup> year | 31              | 137 | 1      | 1      | 1           | 1        |
|   | 2 <sup>nd</sup> year | 53              | 122 | 1.884  | 4.209  | 1.89-9.36   | 0.000    |
|   | 3 <sup>rd</sup> year | 58              | 108 | 2.373  | 5.574  | 2.50-12.45  | 0.000    |
|   | 4 <sup>th</sup> year | 19              | 30  | 2.799  | 4.349  | 1.31-14.43  | 0.016    |
|   | 5 <sup>th</sup> year | 21              | 17  | 5.459  | 29.908 | 6.90-129.57 | 0.000    |
| Substance use                               | No                   | 119             | 404 | 1      | 1      | 1           | 1        |
|   | Yes                  | 62              | 10  | 21.049 | 11.663 | 4.71-28.86  | 0.000    |
| Alcohol use                                 | No                   | 97              | 361 | 1      | 1      | 1           | 1        |
|   | Yes                  | 84              | 53  | 5.898  | 4.586  | 2.50 -8.398 | 0.000    |
| Communication with peer about sexual health | No                   | 162             | 156 | 14.101 | 8.707  | 4.51-16.82  | 0.000    |
|   | Yes                  | 19              | 258 | 1      | 1      | 1           | 1        |
| Monthly income                              | <500                 | 98              | 332 | 0.77   | 0.83   | 0.02-0.32   | 0.000    |
|   | 500-100              | 56              | 75  | 0.194  | 0.196  | 0.05-0.73   | 0.015    |
|   | >1000                | 27              | 7   | 1      | 1      | 1           | 1        |

Note: COR=crude odds ratio, AOR=adjusted odds ratio, CI=confidence interval

## DISCUSSION

The pre-marital sexual activity and reproductive health of young people in developing countries have attended considerable attention over the last 15 years, in which youth takes a large place in the population and are highly affected by HIV/AIDS and other bad reproductive health outcomes. Several studies in Sub-Saharan Africa have documented high and increasing premarital sexual activities (42). This study was done on randomly selected Debremarkos university students and assessed the prevalence of pre-marital sexual practices, associated factors, and consequences. The study revealed that 30.4% CI (0.27-0.34) of respondents ever had premarital sex. This finding is higher than the findings from India (4%) (23), Kathmandu young factory workers(12%)(24), Ethiopia (16%)(15), Ambo University(25.7%)(9), Bihar Dar private college (23.3%)(25), Alatawendo high school (18.3%)(11), Alma-Ata high school and preparatory school(21.1%)(26), and Shendi town high school and preparatory school (19%)(27). This higher finding may result from socio-demographic differences among the study participants particularly since most of the aforementioned studies in Ethiopia were conducted among high school and preparatory students as well as private college students. Hence, this segment of the population is less mature sexually as compared to this study participants. Additionally, their living style also varies. However, it is lower than the findings from the University of Maiduguri (59%)(28), Jigjiga University (67.67%)(29), Arbaminch University(43.1%)(25), Debre Birhan University (54.3)(30) and Madawalabu

University(42.7)(31). This difference may be mainly due to environmental factors as well as differences in information dissemination in reproductive health and institutional policy. The finding is consistent with a study finding in Mezan Tepi University, Ethiopia (35.6%)(32)

The study also revealed that participation in health-related clubs, year of study, substance use, alcohol use, discussion about sexual health with peers, and monthly income are significantly associated with premarital sexual practice. Students who were not participating in health-related clubs were practiced premarital sex three times more likely to have premarital sexual practice as compared to students who participated (AOR=3.286, 95% CI, 1.56-6.94) this finding was similar to a study conducted in Arbaminch university(25). This might be due to having awareness of the bad consequences of premarital sexual practice. This study revealed that senior students were more likely to practice premarital sex than first-year students. This finding is congruent with a study conducted at Arba Minch University (25)and Madawalabu university (31). This may be due to increased familiarity with the environment and reduced course load. Substance and alcohol users were more likely to practice premarital sex than those who were not substance and alcohol non-users respectively. This finding was similar to studies conducted at Arbaminch University (25), rural part of Ethiopia (33), Madawalabu University (31), Alkan University College(34), and Ambo University(9). On the other hand, students who did not discuss reproductive health issues with their peers were more likely to practice premarital sex than students who discussed. This finding is supported by

study findings conducted at Ambo University (9). Additionally, students who were receiving a monthly income of less than 1000 birr were less likely to practice pre-marital sex as compared to students who were receiving more than 1000 birr. This finding was similar to a study conducted at Arba Minch university (25).

## CONCLUSION

Generally speaking, a considerable number of students at Debre Markos University had practiced premarital sex. The Major associated factors for premarital sex among the students have monthly received pocket money, participation in health-related clubs, year of study, substance use, alcohol drinking, and communication with peers about sexual health. Unintended pregnancy, poor academic performance, STI, HIV/AIDS, regret, loss of self-respect, and abortion were the main consequences of premarital sex reported by students.

The university should take the initiative to bring about healthy sexual behavior among their students by strengthening anti-AIDS and reproductive health clubs in the university and researchers have to explore the main reasons for practicing premarital sex qualitatively.

## DECLARATIONS

**Availability of data and materials:** Data supporting this finding can be found upon request.

**Ethics Approval and Consent to Participate:** Debre Markos university's research ethics review committee reviewed the ethical acceptability of the research and informed consent was obtained from each participant during data collection.

**Consent for Publication:** All the authors have a copy of this manuscript. The authors would like to confirm that this article has not been submitted to any other journal and we fully agree to be published in this journal.

**Competing interests:** The authors declare that they have no competing interests.

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**Authors' contributions:** LBZ, YT, and GAW wrote the proposal, participated in data collection, analyzed the data, and drafted the paper. LBZ, AT, and MA drafted the manuscript. All authors read and approved the final manuscript.

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## Abbreviations

DMU: Debre Markos University;

HIV: Human Immune Virus;

AIDS: Acquired Immune Deficiency Syndrome;

STI: Sexually Transmitted Infection;

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