

MAGNITUDE OF PREMARITAL SEXUAL PRACTICE AND ASSOCIATED FACTORS AMONG ADIGRAT HIGH SCHOOL STUDENTS, ETHIOPIA, A CROSS SECTIONAL STUDY

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ABSTRACT

INTRODUCTION: Premarital sexual practice is sexual intercourse experienced before marriage. It usually leads to sexual and reproductive health problems that are the main causes of death, disability and disease among young people in the world particularly in Africa including Ethiopia.

OBJECTIVE: To assess the magnitude of premarital sexual practice and associated factors among Adigrat high school students, Ethiopia, 2015.

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METHODS: A school based cross-sectional study was conducted through self-administered questionnaires. The sample size was determined using single population proportion formula. Data was entered and cleaned using EPI info version 7 and exported and analyzed using Statistical Package for Social Sciences (SPSS) version 20. Logistic regression model was used to measure the association of outcome and independent variables.

RESULT: 567 Adigrat high school students participated in the study. This study revealed that 17.6% of the study participants had practiced premarital sexual intercourse before the study period. The variables found to be associated with premarital sexual practice were, educational level, attending entertainment programs, sexual communication with friends and use of addictive substances.

CONCLUSION AND RECOMMENDATION: There were a substantial proportion of high school students who practiced premarital sexual intercourse. Therefore, collaborative effort needs to address sexual and reproductive health issues of students related to premarital sexual practice.

(Ethiopian Journal of Reproductive Health; 2019; 11;3:15-25)

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INTRODUCTION

Young people constitutes about 1.8 billion (27%) of the world's population with more than four fifths in developing countries¹. There is a dynamic change in emotion, physical and sexual maturation of young people. It is a time when many of them experience critical and life defining challenges such as their first sexual experience, marriage, pregnancy and parenthood².

Though previously not given much attention, sexuality and reproductive health (SRH) became among the most fundamental aspects of life. Sexual activities among young people have been reported to be increasing worldwide. That is why young peoples' sexuality and its consequences has become a major public health concern all over the world. Inciting sexual activity is a natural transition made nearly by all humans. Nevertheless it is not the occurrence of this transition but its timing and circumstances under which it occurs that has significant implications³.

Premarital sexual practice is sexual intercourse experienced before marriage. Most premarital sexual intercourse in youth is unprotected and therefore, they are frequently influenced to participate in risk-taking behaviors. These include early and unsafe sexual activities, having multiple sexual partners, use of alcohol and drugs, violence that could lead to unwanted pregnancy, unsafe abortion, and sexually transmitted illnesses (STIs) including HIV/AIDS, hasty and unpromising marriage, lesser employment opportunity, unplanned parenthood & dropping out of school but majority of these risky behaviors are often associated with premarital sex²⁻⁴.

Since, almost all students in secondary schools are young people; they share changes and challenges³.

Sexual health requires a positive approach to human sexuality and an understanding of the complex factors that shape human sexual behavior. These factors affect whether the expression of sexuality leads to sexual health and well-being or to sexual behavior that put people at risk or make them vulnerable to sexual and reproductive ill-health⁵. Sexual health problems are the main causes of death, disability and disease among young people in

the world particularly in Africa⁶. In Ethiopia, sexually related problems in adolescents and females are at greater rate when compared with old ages and males respectively^{7,8}. During young stage, the challenges that they face and the decisions they make can have a tremendous impact on the quality and length of their lives. Many important life events and health-damaging behaviors that are contributing for premarital sexual activities start during these years⁹.

The vast majority of sexual intercourse in youth is unprotected leading to high mortality and morbidity related to unwanted pregnancy, unsafe abortion and STIs including human immunodeficiency virus/acquire immune deficiency syndrome (HIV/AIDS). Besides, females, particularly young girls, may end up with teenage deliveries and various complications of these including death. In Ethiopia, unsafe abortion is among the most common cause of maternal mortality, accounting for up to 10% of all maternal deaths in the country. The situation is serious for those who are not physically matured¹⁰.

The Federal Ministry of Health (FMOH) reports indicate that nearly 70% of women who seek medical care for incomplete abortion are less than 24 years of age and it is among the leading causes of maternal mortality in Ethiopia¹⁰.

A study done among young students in Bale zone of Oromia regional state also shows that among sexually active students 47.7% of them had sex with multiple partners, 43.7% commence sex with causal partner, 38.9% with partner having multiple sexual partners and 20.5% with commercial sex workers¹¹.

Moreover, girls may drop out from school to rear their children and in most cases, they become economically dependent upon their parents. Students are usually interested to discover sex and are highly likely to practice premarital sex, which is usually unprotected.

The magnitude of premarital sex, risky sexual behavior and adverse health consequences related to premarital sexual practice are significantly increasing worldwide. So this assessment is believed to give the present magnitude of Adigrat high school students' premarital sexual practice and factors related to it.

Therefore, understanding of the magnitude and the factors associated with premarital sex will help the concerned bodies such as policy makers, program planners and implementers to design appropriate effective premarital sexual practice prevention strategies and to take interventions based on the findings.

METHOD AND MATERIALS

School based cross sectional study was carried out from October 05-16/2015 G.C. in Adigrat town to assess magnitude and factors associated with premarital sexual practices among high students at Adigrat Town.

The sample size required for this study was determined using single population proportion formula considering the nature of multistage sampling, a design effect of was used to multiply the sample size obtained at 5% degree of precision and 95% (CI). 10% non-response rate was added. Then at the end 572 study participants were selected by simple random sampling technique using lottery method from each cluster.

Sample size was distributed to each educational level proportional to their school, sex and number. Sample population was clustered according to their educational level as 9th, 10th, 11th and 12th grade. There were 165 sections (classrooms) in all six schools. Sections under each grade (educational level) were used as clusters. Then 57 sections were selected by simple random sampling technique using lottery method. Finally, lists of unmarried students (sampling frame) for each of the selected sections were prepared and proportionally 572 study participants were selected by simple random sampling technique using lottery method from each clusters.

Three MSc midwifery students who are studying at Mekelle University collected the data. Three supervisors were also been assigned from MSc students from Emergency surgery and obstetric care from the same university. Self-administered questionnaires, composed of closed-ended questions, were administered to the study units. A box was prepared in each classroom and students put their own questionnaire in a box by themselves. No school community member was allowed to enter in each room.

To assure the quality and reliability of data, training on the content of the questionnaire and objectives of the study was given to data collectors and supervisors by the principal investigator for one day before the pre-test.

The questionnaire was prepared in English then translated first to Tigrigna (local language) and back to English by the individuals who has good knowledge in both English & Tigrigna languages.

After data was collected, the response was coded, entered and cleaned using EPI info version 7 statistical package, and then exported to SPSS version 20 for analysis. To describe the findings, frequency, tables and graphs were used. Associations between dependent and independent variables were assessed and its strength was presented using odds ratios. Coefficients were expressed as crude Odds ratio (COR) and adjusted Odds ratio (AOR). P-value < 0.05 at 95% CI was taken as statistically significant.

Ethical clearance was obtained from Institutional Review Board (IRB) of College of Health Sciences, Mekelle University and letter of cooperation request was written by education office of the district to each of the six schools.

RESULT

There were 572 students invited to participate in the study, and 567 students participated in the study with the response rate of 99.1%.

1. Socio-demographic Characteristics of the Students

Among 567 students who participated in the study, 263 of them were males and 304 of them were females making the male to female ratio of 1:1.2. The age of the respondents ranges from 14-24 years and median of 16 years with mean and standard deviation of 16.1+1.394. About 88% of them were in the age group of 15-19 years. From the total respondents, 379 (66.8%) were urban while the rest were rural residents. Majority (90.3%) of the respondents were from Tigre ethnic group.

Of the total respondents, most of them were Orthodox Christians (85.5%). Majority of the respondents were living with both their father and mother (61.4%). Regarding their educational level, 40.7% of the sampled population was from Ninth (table 1).

Table 1: - Socio-demographic characteristics of Adigrat high school students, Tigray Regional State, Northern Ethiopia, 2015

Variables	No of participants N = 567	Percent (%)	
Sex	Male	263	46.4
	Female	304	53.6
Age group	10-14 years	57	10.0
	15-19 years	497	87.7
	20-24 years	13	2.3
Educational level	9th	231	40.7
	10th	216	38.1
	11th	57	10.1
	12th	63	11.1
Ethnicity	Tigre	512	90.3
	Erob	50	8.8
	Others*	5	0.9
Religion	Orthodox	485	85.5
	Catholic	60	10.6
	Muslim	15	2.7
	Others**	7	1.2
Place of residence	Urban	379	66.8
	Rural	188	33.2
With whom a student live	Mother & father	384	61.4
	Father only	56	9.9
	Mother only	11	1.9
	Other family members	92	16.2
	Friends	18	3.2
	Alone	33	5.8
	Other***	9	1.6

Key: * Amhara or Afar; ** Protestant or no religion, *** Grandmother, missionary organization or teachers

2. Family Characteristics

Most study participants (92.2%) reported that their parents were both alive and 458 (80.8%) of them perceived that they are from middle income families and 87.1% the parents were not consuming addictive substances. A little higher than one-half of the parents (46.7%) were both literate (table 2).

Table 2: - Family characteristics of Adigrat high school students, Tigray Regional State, Northern Ethiopia, 2015.

Variables		No of participants N = 567	Percent (%)
Both parents alive	Yes	523	92.2
	No	44	7.8
Parents literacy	Both attended formal education	265	46.7
	Both not attended formal education	105	18.5
	One attended formal education	197	34.8
Parents job status	Both have job	417	73.5
	Only father have job	111	19.6
	Only mother have job	31	5.5
	Both do not have jobs	3	1.4
Fathers' occupation	N = 562		
	Farmer	186	32.8
	Government employee	155	27.3
	Non-government employee	57	10.1
	Merchant	119	21
	Other*	12	2.1
Mothers' occupation	N = 529		
	Farmer	150	26.5
	Government employee	99	17.5
	Non-government employee	63	11.1
	Merchant	127	22.4
	Household	99	17.5
Perceived economic status of the family	N = 539		
	Poor	49	8.6
	Middle class	458	80.8
	Rich	60	10.6
Addictive substance consumer in the family	No	494	87.1
	Yes	73	12.9

Key: * Driver, contractor, carpenter, ** Waiter,

3. SRH Related Communication with Parents and Friends

Most of the respondents 430 (75.8%) and 379 (66.8%) were not communicating about sexual and reproductive issues with their father and mother respectively. Nearly half 285 (50.3%) of them were not communicating sexual related issues often with their friends.

4. Last Year Academic Achievement

Concerning the respondents last year academic achievement, majority 237 (41.8%) of them scored a cumulative average ranging from 50-74%.

5. Having Pocket money, Attending Religious Service and Entertainment Programs of the students

Of the total respondents, 127 (22.4%) respondents have had pocket money. Of the 51 (9%) addictive substance users, 28 (4.9%) of them were using alcohol followed by hashish 16 (2.8%).

6. Sexual Character of Students

Among all the study participants, 100 (17.6%) respondents reported that they ever practiced premarital sexual intercourse before the data collection period, of which 46% of them were males and 54% females. The

median age of first sexual intercourse was 15 years and range from 13-20 years. The mean age was 15.2+1.4 years. Among sexually active participants, 58% of them begun sexual intercourse at an age below the mean. Almost all sexually active respondents had their first sexual intercourse before the age of 18 years (95%). Among 34 students who practiced premarital sex after taking addictive substances, 15 (44.1%) of them reported that addictive substances were their reason for premarital sex.

7. Sexual Information and its Source

About 75.1% of respondents had information regarding sexuality and reproductive health issues and the main source of information 144 (18.9%) was friends followed by families 143 (18.8%).

8. Reason for the Initiation of Sex

The main reason for the initiation of sexual intercourse was peer pressure accounting 36 % followed by being fallen in love (21%) and sexual intercourse to get pleasure (19%).

Factors Associated with Premarital Sexual practice

The bivariate analysis showed that some of the variables had significant association with premarital sexual practice of the students. The multivariate analysis supported some of the findings of the bivariate analysis (table 3).

Multivariate regression shows that 12th grade students were about eight times (AOR = 7.587 and CI = 3.448, 16.696) more likely practiced premarital sex than 9th grade students did. Communication of issues related to sexuality and reproductive health with people other than their families, like friends, indicated as having association with premarital sexual practice. For example, students who often communicate the issue with people other than their families, like friends were about six times more likely practiced premarital sexual intercourse than those who never communicate (AOR= 5.627 and 95% CI = 2.372, 13.346). Likewise, students who were taking addictive substances were about twenty three times more likely practiced premarital sexual intercourse

than their counter parts (AOR = 22.927 and 95% CI = 9.018, 58.286)table 3.

Students who have had pocket money were two times more likely to be exposed to premarital sex than those who did not have pocket money (AOR = 2.225 and CI = 1.252, 3.953). As compared to students who didn't attend entertainment programs, those who attended entertainment programs were three times more likely practiced premarital sex (AOR = 2.921, CI = 1.705, 5.003) table 3.

Table 3: Factors associated with premarital sexual practice among Adigrat high school students, Tigray Regional State, Northern Ethiopia, 2015.

Variables	Practiced premarital sex		COR (95% CI)	AOR (95% CI)
	Yes	No		
Age				
10-14	3 (5.3%)	54 (94.7%)	1.00	
15-19	92 (18.5%)	405 (81.5%)	4.089 (1.251, 13.366)	
20-24	5 (38.5%)	8 (61.5%)	11.250 (2.243, 56.421)	
Perceived economic status of family				
Poor	14 (28.6%)	35 (71.4%)	1.00	
Middle class	68 (14.9%)	390 (85.1%)	.436 (.223, .853)	
Rich	18 (30%)	42 (70%)	1.071(.467, 2.457)	
Substance user among family member				
Yes	37 (50.7%)	36 (49.3%)	7.031 (4.141, 11.940)	
No	63 (12.7%)	431 (87.3%)	1.00	
Have information about sexuality and RH				
Yes	89 (20.9%)	337 (79.1%)	3.121 (1.616, 6.028)	
No	11 (7.8%)	130 (92.2%)	1.00	
Educational level of students				
9th	21(9.1%)	210(98.9%)	1.00	1.00
10th	28(13%)	188(57%)	1.489 (.818, .2.711)	1.527 (.778, 3.000)
11th	20(35.1%)	37(64.9%)	5.405 (2.671, 10.940)	5.585(2.471,12.625)*
12th	31(49.2%)	32(50.8%)	9.687 (4.971, 18.871)	7.587 (3.448, 16.696)*
Communication about sexual issues with friends				
Often	25(39.7%)	38(60.3%)	5.592(2.976, 10.508)	5.627(2.372, 13.346)*
Occasionally	45(20.6%)	174(79.4%)	2.198(1.333, 3.626)	1.945 (1.002, 3.775)**
Never	30(10.5%)	255(88.5%)	1.00	1.00
Addictive substance use				
Yes	42(82.4%)	9(17.6%)	18.510(8.510, 41.630)	22.927(9.018, 58.286)*
No	58(11.2%)	458(88.8%)	1.00	1.00
Having pocket money				
Yes	40(31.5%)	87(68.5%)	2.912(1.833, 4.626)	2.225(1.252, 3.953)**
No	60(13.6%)	380(86.4%)	1.00	1.00
Attending entertainments				
Yes	56(30%)	131(70%)	3.264(2.095, 5.86)	2.921(1.705, 5.003)*
No	44(11.6%)	336(88.4%)	1.00	1.00

Key: * p-value < 0.01, ** p-value < 0.05

DISCUSSION

The overall magnitude of premarital sex among Adigrat high school students was high (17.6%) of which 46% were males and 54% females. This finding is in line with study done on prevalence of in school youth in Shendi, West Gojjam zone²³. However, it is lower than several research findings in Ethiopia as well as abroad. For example, a school-based study done in Bahir Dar

revealed that the prevalence of premarital sex was 30.8% and in Nekemte high school students, it was 21.5%^{21,22}. In high school students of eastern part of Ethiopia, the prevalence was 24.8%²⁰. Similarly, a study conducted in Sub Saharan Africa indicated that the figures were much higher than the current finding which was 45-52% for both sexes¹⁸. This difference may be because of cultural difference and societal acceptance

that maintaining virginity until marriage may be the norm. That is, absence of virginity at time of marriage is culturally unacceptable and it is a societal taboo in the area. The other possibility could be reduced age at school, which is the age of students was decreasing relative to the age before.

When compared to students who did not use addictive substance, students who were consuming addictive substances were about twenty three times more likely to be engaged in premarital sexual intercourse (AOR = 22.927 and 95% CI = 9.018, 58.286). Using addictive substances was also a significant associated factor for students' premarital sexual intercourse in similar studies conducted in different parts of Ethiopia^{22,23}. Similarly, other studies report that alcohol drinking and chat chewing are strongly associated with rape and early initiation of sex^{28,43}. This might be because; those students who are consuming addictive substance may have more exposure to peer pressure and/or loss self-control, thereby exposed to premarital sexual intercourse. This study indicated that students who were communicating about sexual and reproductive health related issues with people other than their families were practicing premarital sexual intercourse about six times more likely than those who never communicate (AOR = 5.627 and 95% CI = 2.372, 13.346). This finding is also in line with the research findings in Jimma and Nigeria^{27,29}. It is easier for the students to discuss sensitive issues such as sexuality with peers than family members. Peer pressure might enforce them towards use of addictive substances thereby exposing them for practice sexual practice. Students could discuss issues concerning sexuality and reproductive health while consuming addictive substances. A student, who is chewing khat, most of the time, may drink alcohol. Drinking alcohol can decrease self-control and may predispose to premarital sexual intercourse.

According to their level of education, 12th grade students were about eight times (AOR = 7.587 and CI = 3.448, 16.696) more likely practiced premarital sex than the 9th grade students did. This finding is also in line with studies from Bahir Dar and eastern Ethiopia^{20,22}. As the educational level increases, the age of the student, exposure to peer pressure, access of SRH information

from friends and/or exposure to addictive substance may increase. These may be the reason for the higher educational level are more likely being practiced premarital sex than the lower educational level.

As compared to students who did not attend entertainment programs, those who attended entertainment programs were about three times more likely practiced premarital sexual intercourse (AOR = 2.921). There are studies supporting this research finding that exposure to pornographic movies, going to bars and nightclubs predispose students for premarital sexual intercourse than their counter parts^{24,27}. This might be because those students who went to entertainment areas like bars, nightclubs, trips etc. may use alcohol or other addictive substances. Therefore, they may lose their self-control and practice premarital sex.

Students who have had pocket money were about two times more likely to practiced premarital sexual intercourse than their counter parts (AOR = 2.225 and CI = 1.252, 3.953). This study finding is similar with the findings in Nekemte, Jimma and eastern part of Ethiopia^{20,21,27}. For example, in Jimma respondents who had pocket money were more likely to have premarital sexual practice than those who had not (COR = 1.58). This might be because students who have pocket money may not manage it properly. They can better attend different entertainments programs, exposed for addictive substances and/or exposed to different Medias that initiate sex that can lead them to be engaged to premarital sex.

STRENGTHS AND LIMITATIONS

Strengths

The data were primary and collected anonymously by putting students at far space between them to maintain privacy and confidentiality of the respondents and probability sampling method employed to minimize sampling bias. High response rate and large sample size could be considered as other strengths of the study.

Limitations

Since this study touches a very sensitive and very personal issue and the outcomes are based on self-reported information, the possibility of underestimating

the magnitude of premarital sexual practice cannot be ruled out. The study was school based and small scale; it is difficult to generalize the result of this study for the completely young population outside the school. Since it is a cross sectional study, it does not indicate cause and effect association.

CONCLUSION

The study found that there is a substantial proportion of unmarried high school students were practicing premarital sexual intercourse in the study area. The most frequently mentioned reason for student's engagement in premarital sexual practice was peer pressure.

The variables like educational level, having pocket money, attending entertainment programs, consuming addictive substances and communication of sexual issues with friends were found to be factors associated with premarital sexual practice. That is those students who have pocket money, attained entertainment programs, use addictive substances, and communicate about sexual and reproductive health related issues with friends or other people outside the families are more likely to be engaged in premarital sex.

RECOMMENDATIONS

The Adigrat health and education offices in collaboration with local and national NGOs need to assess and expand the safety and accessibility of recreational areas. They also need to make students access to information concerning reproductive health, clubs, youth centers and sexuality issues.

The concerned government bodies, like youth and sport office of the town, need to create recreational and sports facilities in the community, thus diverting youth's attention in other healthy areas and keeping them constructively busy in mind and spirit.

DECLARATIONS

COMPETING INTERESTS

The authors declare that they have no competing interests.

Authors' contributions

KB and LH wrote the proposal, participated in data collection, analyzed the data and drafted the paper.

Daniel Bekele, ,Balem Dimtsu approved the proposal with some revisions, participated in data analysis and revised subsequent drafts of the paper. All authors read and approved the final manuscript.

ACKNOWLEDGEMENTS

Researcher acknowledges to the support of Mekelle University, Midwifery Department in conducting this research. I would like to thank the Adigrat education office, all school communities, data collectors, supervisors and Classmates

FUNDING

No funding was obtained for this study

CONSENT FOR PUBLICATION

Not applicable.

ETHICS APPROVAL & CONSENT TO PARTICIPATE

This study is a primary data, which was taken from Adigrat high school students. Ethical review for data collection was taken from Ethical Approval committee, Mekele University, college of Health sciences. Further, this study was registered and approved by the Mekele University, college of health sciences, approval Committee.

AVAILABILITY OF DATA AND MATERIALS

All data pertaining to this study are available in this document.

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