

# Risky sexual behaviour and associated factors among students of Debre Tabor University, Northwest Ethiopia: a cross-sectional study

Awoke Derbie<sup>1</sup>, Mekonnen Assefa<sup>2</sup>, Daniel Mekonnen<sup>1</sup>, Fantahun Biadlegne<sup>1</sup>

## Abstract

**Introduction:** Youth are the foundation of any society. Neglecting their sexual and reproductive health leads to high social and economic crisis. However, there is limited information on the sexual and reproductive health aspects of University students in Ethiopia. Thus, the aim of this study was to assess risky sexual behaviours and associated factors among students of Debre Tabor University.

**Methods and materials:** A cross-sectional survey was conducted between 1 February and 30 March 2014 using self-administered structured questionnaire to collect data on socio-demographic, sexual and associated risk behaviours among 394 University students. Descriptive and stepwise logistic regression model was carried out using SPSS version 21. A *p* value of < 0.05 and 95% CI was considered to test statistical significance.

**Results:** A total of 394 students were enrolled in the study. Among these, 347 (88.1%) provided complete responses. About 97 (28.4%) study participants had sexual experience at the mean age of 18.9 years (SD 1.9 years). Out of these, 59 (62.1%) had sexual contact with their regular friends. Female students under the age of 18 were less likely to start sexual intercourse compared with males [AOR=0.2, 95%CI (0.7-0.9)]. Students who had symptoms of sexually transmitted infection (STI) were 16 times more likely to have early sexual contact compared to those students who had no symptoms [AOR = 16.4, 95% CI (1.4-193)]. Not using condom at the first [AOR= 3.2 95%CI (1.2-10.5)] and last [AOR= 3.8, 95%CI (1.2-13.6)] sexual engagement were significant predictors of having multiple sexual partners.

**Conclusions:** This study revealed risky sexual behaviours among Debre Tabor University students. Thus, continuous and intensified public health strategies on health education and reproductive health services are required to address the sexual and reproductive health needs of the students. [*Ethiop. J. Health Dev.* 2016;30(1):11-18]

**Key words:** Risky sexual behaviours, University students, Debre Tabor

## Introduction

In developing countries where higher education is dramatically expanding, it is important to understand the force that influences youth education and how these forces interlink to the universities (1). Globally, sexuality and sexual behavior are of great concern with the age group of 15-24 years (2). The risky sexual behavior of youths can be defined in a number of ways. The most widely used definition for risky sexual behavior could be: unprotected vaginal, oral, or anal intercourse (3). Center for Disease Control and prevention (CDC) has also defined risky sexual behavior as a behavior that increases one's risk of contracting STI and experiencing unintended pregnancy (4).

University students are exposed to a variety of risky sexual behaviours such as early sexual initiation, experiencing multiple sexual partners, unprotected sex, having sexual intercourse with the same sex, the use of substances like alcohol or drugs and involved in sex, having sex with older age partners and non-regular partners such as commercial sex workers (CSW) (2, 3). Individuals involved in such risky sexual behaviours would be vulnerable to STIs including HIV infection. Besides, they would be involved in unplanned pregnancy and abortion (5). The increased number of students in the university, the lack of

facilities for sexual and reproductive health services might worsen risky sexual behaviours (2, 5-8).

Neglecting the youth sexual and reproductive health may lead to high social and economic costs, both immediately and in the future. Thus, the country's future economic, social, and political progress and stability depends on how well the sexual and reproductive health need of this group is addressed (6).

There are limited studies on risky sexual behaviours of students in the context of higher education institutions of Ethiopia (2, 5, 6). Efficient knowledge of the state of risky sexual behavior in the study area is scarce. Therefore, the aim of this study was to assess risky sexual behaviours and possible associated factors among students of Debre Tabor University (DTU). The finding of this study may reflect the realities on risky sexual behaviours in similar institutions in the country. In addition, this may help to establish and scale up sexual and reproductive health (SRH) program in higher institutions of Ethiopia.

## Methods

**Study area, period and design:** This institutional based cross-sectional survey was conducted from 1 February to 30 March 2014 at DTU, Northwest Ethiopia. The University was established in 2010/11

<sup>1</sup>Department of Medical Microbiology, Immunology and Parasitology, College of Medicine and Health Sciences, Bahir Dar University, Awoke Derbie, Email: [awe.love2000@gmail.com](mailto:awe.love2000@gmail.com), Cell phone: +251-913059887, P.O. Box 1387 or 79, Bahir Dar University, Ethiopia;

<sup>2</sup>Social and Public Health (SPH) Unit, College of Health Sciences, Debre Tabor University, Ethiopia.

and located in Debre Tabor town, 650 kilometers away from Addis Ababa, the capital of Ethiopia. The number of students enrolled in the University during 2014 academic year was 5600.

**Study population and sampling technique:** The sample size was determined using 95% level of significance and considering the proportion of various risky sexual behaviours which were reported from other similar studies in the country (2, 6). The proportion of multiple sexual partner (45.3%) and 10% non-response were considered to determine the final sample size at 394. Simple random sampling technique proportional to class year was employed to select study participants. The list of all class year students of 21 departments was obtained from the university registrar office. The required numbers of students were selected using simple random sampling technique among third, second and first year students. All departments and both sexes were represented.

**Data collection and analysis:** Structured and pretested self-administered questionnaire was used to collect data on socio-demographic and risky sexual behaviours (such as early sexual initiation, multiple sexual partners, unprotected sex, the use of substances like alcohol or drugs and involved in sex, having sex with older age partners and non-regular partners such as CSW). Data were cleaned and entered using Epi Info

version 3.3.2 statistical software and were transported to and analyzed using SPSS version 21. Stepwise logistic regression model was used to identify important determinants of risky sexual behaviour. A P-value of <0.05 and 95%CI were considered to indicate statistical significance.

**Ethical considerations:** The study was reviewed and approved by an Institutional Review Board (IRB) of DTU. After the research staff explained about the purpose and importance of the study, written informed consent was obtained from each study participants. Individual records were coded and accessed confidentially only by research staff.

## Results

**Socio-demographic characteristics:** The overall response rate in our study was at 87.1% (343/394). About 229 (66.8%) were male and the mean age of the participants was at 21.1 years (SD  $\pm$ 2.3). In our findings 330 (96.2%) of the study participants were never married. One hundred seventy five (51.0%) of the study participants joined the university from urban settings. With regard to the educational level of the students' family, 67(19.8%) of the students' father were able to read and write whereas 140 (41.1%) of the students' mothers were unable to read and write (Table 1).

Table 1: **Socio-demographic characteristics of the study participants in Debre Tabor University, Debre Tabor, Ethiopia, 2014.**

Variable	Frequency	Percent (%)
<b>Sex</b>		
Male	229	66.8
Female	114	33.2
<b>Age</b>		
Mean $\pm$ SD	21.07 $\pm$ 2.32	
Age at first sexual contact		
Mean $\pm$ SD	18.99 $\pm$ 1.9	
<b>Marital status</b>		
Single	330	96.2
Married	13	3.8
<b>Religion</b>		
Orthodox	271	79.2
Protestant	31	9.1
Muslim	31	9.1
Catholic	7	2.0
Others	2	0.6
<b>Place of residence</b>		
Urban	175	51.0
Rural	168	49.0
<b>Previous high school</b>		
Public high school	321	39.9
Private school	18	5.3
Missionary/religious school	2	0.6
Others	1	0.3
<b>Father's education</b>		
Unable to read and write	67	19.8
Read and write	211	62.2
College/University degree and above	61	18.0
<b>Mother's education</b>		
Unable to read and write	140	41.1
Read and write	177	51.9
College/University degree and above	24	7.0

**Sexual experiences of the respondents:** About 97 (28.4%) students had history of sexual intercourse which could be before or after joining the University. The mean age during first sexual intercourse was at 18.9 years (Std. deviation  $\pm 1.9$ ). In this finding, 59 (62.1%) of the participants reported that they have had first sexual intercourse with their boy and/or girlfriends. About 39 (40.6%) of the study participants reported to have had sex in relation to love and 28 (29.2%) of them experienced their first sex owing to personal desire. Fifty one (53.1%) of the students was engaged in sexual activity with the same age of their sexual partner.

Two hundred forty nine (72.6%) of the participants reported to know that condom can prevent STI including HIV. Out of these, 58 (60.4%) reported the use of condom during their sexual intercourse. Among sexually active participants, 12 (12.4%) students reported that they had history of sexual intercourse with CSW. Of these, 10 (83.3%) used condom during their sexual intercourse with CSW. On top of this, about 26 (28.6%) sexually active students reported that they have had sexual intercourse after they drank alcohol (Table 2).

Table 2: Profile of sexually active study participants in Debre Tabor University, Ethiopia, 2014.

Variable	Frequency	Percent (%)
<b>First sex with</b>		
Boy/ girl friends	59	62.1
Causal boy/ girl friend	25	26.3
Husband/ wife	7	7.4
Commercial sex workers	2	2.1
Other	2	2.1
<b>Reason. History of sex</b>		
Fall in love	39	40.6
Had personal desire	28	29.2
Marital	7	7.3
Raped	1	1.0
Peer Pressure	17	17.7
Influence of alcohol	2	2.1
Others	2	2.1
<b>Age of the person you did intercourse with</b>		
Similar age	51	53.1
More than ten years older	6	6.2
Five to ten years old	4	4.2
Less than five older	4	16.7
Younger than me	16	15.6
Others	15	
<b>Condom used</b>		
Yes	58	60.4
No	38	39.6
<b>Condom used during first sexual intercourse</b>		
Yes	34	36.2
No	60	63.8
<b>Drunk alcohol</b>		
Yes	26	28.6
No	65	71.4

**Personal risk perceptions and substance use:** The use of substances and personal risk perceptions of the students in DTU is summarized in Table 3. One hundred seventy three (61.3%) of the students reported that HIV/AIDS is a serious threat to the community and 180 (52.5%) participants believed that they have low risk to contract HIV/AIDS whereas 123 (35.9%) of them reported that they had no risk to HIV/AIDS at all.

Regarding substance use, this finding revealed that 34 (9.9%) reported they had the experience of chewing *chat*. Of whom, 30 (93.8%) of them had started chewing *khat* before joining the University. Ninety eight and 99.4% of the study participants reported that they had no experience of using tobacco and illicit drugs, respectively.

Table 3: **Personal risk perceptions and substance use of students in Debre Tabor University, Ethiopia, 2014.**

<b>Variable</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Condom prevents STI/HIV</b>		
Yes	249	72.6
No	65	19.0
Don't know	29	8.5
<b>AIDS is a serious threat to the community</b>		
Yes	173	61.3
No	109	38.7
<b>My chance of contracting HIV/AIDS</b>		
High	7	2.0
Low	180	52.5
No chance at all	123	35.9
Others	33	9.6
<b>Chewing Khat</b>		
Yes	34	9.9
No	308	90.1
<b>Time starting chewing Khat</b>		
Before joining the University	30	88.2
After joining the University	4	11.8
<b>Have you ever used Alcohol</b>		
Yes	177	51.6
No	166	48.4
<b>When did you start drinking alcohol</b>		
Before joining the University	162	91.5
After joining the University	15	8.5
<b>Have you ever used tobacco products</b>		
Yes	7	2.0
No	336	98.0
<b>Have you ever used illicit substances</b>		
Yes	2	0.6
No	341	99.4

**Factors affecting risky sexual behaviours:** Female students under the age of 18 were less likely to start sexual intercourse [AOR= 0.2, 95% CI (0.7-0.9)]. On bi-variant analysis, the odds of having early sexual debut among students who join the university from urban area were 3.6 times (95% CI 1.3-9.8, P=0.01) higher for those before the age of 18 years compared to students from rural areas. However, no significance difference in early sexual practice among students between urban and rural settings was obtained. Study participants who ever had symptoms of STI were 16 times more likely to have early sexual contact [AOR =

16.4 95% CI (1.4-193)] compared to those who had no symptoms. Students who ever used alcohols were 80% times less likely to have early sexual contact compared to students who do not (AOR = 0.2 95% CI (0.06-0.9)) (Table 4).

The odds of having multiple sexual partners were at 3.8 (95% CI 1.2-13.6) and 3.2 (95%CI 1.2-10.5) times higher among students who did not use condom during their first and last sexual contact respectively compared to those students who used condom (Table 5).

Table 4: Bivariate and multivariate logistic regression analysis of participants' age at first sexual contact with possible predictors, Debre Tabor University, Ethiopia, 2014.

Variable	Age at first sexual contact		COR (95% CI)	AOR (95% CI)
	≤ 18 yrs No (%)	>18 yrs No (%)		
<b>Sex of the participants</b>				
Male	20 (35.7%)	36 (64.3%)	1	1
Female	13 (54.2%)	11 (45.8%)	0.47(0.2-1.2)	0.2(0.7-0.9)**
<b>Place of residence</b>				
Urban	26 (52.0%)	24 (48.0%)	1	1
Rural	7 (23.3%)	23 (76.7%)	3.56(1.3-9.8)*	2.9(0.8-11.4)
<b>Father's education</b>				
Unable to read and write	1(12.5%)	7 (87.5%)	6.36(0.7-61.1)	1.1(0.06-21.9)
Read and write	22 (43.1%)	29 (56.9%)	1.2(0.4-3.32)	0.8(0.2-3.6)
College/University degree and above	10 (47.6%)	11(52.4%)	1	1
<b>Mother's education</b>				
Unable to read and write	2(9.5%)	19 (90.5%)	9.5(1.3-70.9)*	7.4(0.6-93.8)
Read and write	27 (52.9%)	24 (47.1%)	0.8(0.2-3.9)	0.8(0.1-5.08)
College/University degree and above	4(50.0%)	4(50.0%)	1	1
<b>Have you ever chewing <i>Khat</i></b>				
Yes	11(57.9%)	8(42.1%)	0.4(0.1-1.2)	0.7(0.2-3.3)
No	22(36.1%)	39(63.9%)	1	1
<b>Have you ever had symptoms of STI</b>				
Yes	1(14.3%)	6(85.7%)	1	16.4(1.4-193)**
No	32(43.8%)	41(56.2%)	4.6(0.5-40.8)	1
<b>Have you ever used alcohol</b>				
Yes	25(47.2%)	28(52.8%)	0.5(0.2-1.3)	0.2 (0.06-0.9)**
No	8(29.6%)	19(70.4%)	1	1

Table 5: **Bivariate and multivariate logistic regression analysis of participants' multiple sexual partner profile with possible predictors, Debre Tabor University, Ethiopia, 2014.**

Variable	Multiple sexual partner		COR (95% CI)	AOR (95% CI)
	One person No (%)	≥ two person No (%)		
<b>Place of residence</b>				
Urban	34 (57.6%)	25 (42.4%)	0.5(0.2-1.0)	0.5(0.2-1.13)
Rural	14(38.9%)	22(61.1%)	1	1
<b>Previous high school</b>				
Public high school	41 (48.2%)	44(51.8%)	1	1
Private high school	7(77.8%)	2(22.2%)	0.3(0.1-1.4)	0.2(0.01-1.4)
Others	0(0%)	1(100%)	1.5E9(0.0)	1.6E9(0.0)
<b>Age at first sexual act</b>				
≤ 18 years	23(69.7%)	10(30.3%)	1	1
> 18 years	20(42.6%)	27(57.4%)	3.1(1.2-7.9)*	0.4 (0.1-1.1)
<b>How old/ younger was the person you did first sexual intercourse</b>				
Similar age	31 (62.0%)	19 (38.0%)	1	1
> 10 years older	2(33.3%)	4(66.7%)	3.2(0.5-19.5)	3.8(0.3-58.3)
5-10 years older	2(50.0%)	2(50.0%)	1.6(0.2-12.5)	3.8(0.2-66.8)
< 5 years older	2(50.0%)	2(50.0%)	1.6(0.2-12.5)	3.1(0.2-34.0)
Younger than me	5(31.2%)	11(68.8%)	3.5(1.1-11.9)	1.2(0.2-6.4)
Others	6(40.0%)	9(60.0%)	2.4(0.7-7.9)	3.8(0.7-20.2)
<b>Condom prevents STI/HIV</b>				
Yes	46(56.1%)	36(43.9%)	1	1
No	1(10.0%)	9(90.0%)	11.5(1.4-94.9)	6.8(0.4-128)
Don't know	1(33.3%)	2(66.7)	2.5(0.2-29.3)	2.3(0.1-41.0)
<b>Did you use condom at first sexual intercourse</b>				
Yes	23 (67.6%)	11(32.4%)	1	1
No	23(39.0%)	36(61.0%)	2.8(1.2-6.6)	3.8(1.2-13.6)*
<b>Did you use condom for your last sexual contact</b>				
Yes	29(65.9%)	15(34.1%)	1	1
No	16(33.3%)	32(66.7%)	3.3(1.3-7.9)	3.2(1.2-10.5)*

## Discussion

It is believed that university students are assets of a nation and potential agents to address the gap in the past and on whom the future national development and the entire generation is based. These groups of society are on the way of transforming to adulthood with great ambition. Unless appropriate age and institution targeted interventions exist, certain behaviors and acts of the students can place them at greater risk of STI including HIV and unwanted pregnancy (3, 4).

Shattering their ambition and neglecting implicating on the development of the country.

The present study indicated 28.4% of the students had experienced sex which is similar with other reports from Ethiopia and elsewhere in the world (5, 9). In contrast to this study, 80% of similar group of university students were found to have sexual experience in Madagascar (10). In contrast to our study, the CDC report in 2013 (11) indicated that about 47% of the high school students have engaged in early sexual practice. The lower proportion in our study might be due to the differences in the study design and socioeconomic characteristics of the study participants.

This study showed that male students were more likely to start sexual activity earlier than females. This might be due to the differences in the social interactions, peer pressure and environmental factors between males and females. In addition, males might have access to information, like pornography from internet frequently as compared to females (personal opinion). The finding of our study was found to be contradicted with other similar study from western Ethiopia (12). However, it was in agreement with the study done in eastern Ethiopia (13).

Furthermore, this study revealed that students who had symptoms of STI were more likely to be engaged early in sexual intercourse before 18 years of age. This might be due to the fact that students who were engaged in early sex might not be aware of STI and experience unsafe sex. This in turn could result in different STIs. In contrast with a study conducted in the same zone (14), a better risk perception of HIV among the students was reported in the present study.

In this study, students with two or more sexual partners used condom inconsistently and also practiced drinking alcohol. The perception to contract HIV is higher among these study participants perhaps as a result of

their inconsistent use of condom. Similar findings were reported elsewhere in the world (14, 15). This finding underscores the importance of health education to prevent youths from HIV/AIDS, sexual and reproductive health problems.

In this study, students who ever used alcohol were 80% times less likely to have early sexual intercourse compared to students who do not. This finding is inconsistent with other findings reported in Ethiopia and somewhere else in the globe (3, 16-17), where significant and linear association between alcohol intake and sexual engagement was reported. Although the small sample size and participant's response bias could influence our report, the finding implies that experiencing alcohol may not always associate with early sexual exposure among the study participants.

In the present study, the odds of having multiple sexual partners were higher among students who did not use condom during their first and last sexual intercourse. Students who did not use condom for their last sexual contact were more than 3 times more likely to have multiple sexual partners. This finding is consistent with the study conducted in western Ethiopia (12). On a study conducted in Butajira, of the study participants who experienced sexual intercourse for the first time, only one third were found to have used condom (18). In our finding, the less use of condom might be an indication of the high sexual risk behaviours which are still widely practiced among the University students. This calls for a well-organized information, education and communication through peer educators to bring about behavioural change.

**Limitation:** The study lacks data on the sexual experiences of students before they join the University. However, this study provides useful information for further study among risky sexual practice of university students in Ethiopia.

#### **Conclusions:**

This study revealed risky sexual behavior such as having multiple sexual partners and sexual practice without condom among the University students. Therefore, adolescents and youth friendly reproductive health services should be expanded to minimize those risky behaviors and practices among the University students with particular focus on behavioral change.

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