



RESEARCH ARTICLE

Determinants of Risky Sexual Behaviors among Students of Mizan Aman College of Health Science, Southwest Ethiopia: Cross-Sectional Study

Teklemariam Ergat Yarinbab^{1*}, Nega Yimer Tawi², Israel Darkiab², Fikadu Debele² and Wasihun Adraro Ambo²

¹Department of Public Health, College of Health Science, Mizan-Tepi University, Ethiopia

²Department of Public Health, Mizan-Aman College of Health Science, Ethiopia

*Corresponding author: Teklemariam Ergat Yarinbab, Department of Public Health, College of Health Science, Mizan-Tepi University, Ethiopia



Abstract

Background: Risky sexual behavior is a behavior related to sexuality which increases the susceptibility of an individual to reproductive health problems like Sexually Transmitted Diseases (STIs), unwanted pregnancy, abortion and psychological distress. Young people's are at higher risk of practicing risky sexual behaviors due to their risk taking behavior. The rate of risky sexual behaviors is increasing in developing countries. Therefore, the aim of this study was to the determinants of risky sexual behaviors among students of Mizan-Aman College of Health Science, Southwest Ethiopia.

Methods: Cross sectional study was conducted in Mizan-Aman College of Health Science, Southwest Ethiopia. Simple random sampling technique was used. Self-administered questionnaires were used to collect data. SPSS version 20.0 was used for Bivariate and Multivariate Analysis.

Result: About 35% of the study participants had at least one of the risky sexual behaviors. Accordingly; 57.6% of the study participants reported to have sexual intercourse before age of eighteen, 16.3% had more than one sexual partner, 16.7% had sexual intercourse with commercial sex workers and 86.9% reported inconsistent use of condoms. Besides; alcohol drinking was reported by 17.2% of the respondents whereas 4.8% said that they chew khat. Alcohol drinking (AOR = 7.77, 95% CI = 3.04, 19.87), perception of being at high risk of getting HIV (AOR = 3.97, 95% CI = 1.08, 14.59) and younger age status (AOR = 2.9, 95% CI = 1.38, 6.13) were found to be determinants of risky sexual behaviors.

Conclusion: Above one-third of the respondents had at least one of the risky sexual behaviors. Perception of being at high risk of getting HIV, alcohol drinking, and younger age status were major determinants of risky sexual behaviors.

Keywords

Risky sexual behavior, Students, Mizan-Aman College of Health Science, Ethiopia

List of Abbreviations

AOR: Adjusted Odds Ratio; AIDS: Acquired Immune Deficiency Syndrome; COR: Crude Odds Ratio; EDHS: Ethiopian Demographic Health Survey; FPC: Finite Population Correction; HIV: Human Immune Deficiency Virus; SPSS: Statistical Package for Social Sciences; STI: Sexually Transmitted Diseases

Introduction

Risky sexual behavior is a sexuality related behavior which increases the susceptibility of an individual to reproductive health problems such as Sexually Transmitted Diseases (STIs), unintended pregnancy, abortion and mental distress. Risky sexual behavior includes having more than one sexual partner, early sexual initiation, inconsistent use of condom, and having sex with commercial sex workers. Additionally, the use of substances such as alcohol use during sex may engage young peoples in risky sexual behaviors since it affects their judgment [1-3].

Promotion of safe sex and encouragement of contraceptive use would contribute greatly to reduction of sex-related morbidity and mortality caused by teenage pregnancy, abortion, and HIV/AIDS. To do this, howev-

er, there is the need to understand sexual behaviors in order to design effective interventions [4].

Young people face the increased risky sexual behavior by virtue of their social position, unequal life chances, rigid and stereotypical gender roles and poor access to education and health services. Besides, they have limited access to reproductive health services that focus on the special needs of adolescents. Inadequate knowledge about adolescents' sexual behavior by the society, cultural influences and the limited capacity of implementing reproductive health services hinder the provision of reproductive health education and services to the young [5].

The behaviors young people adapt and those they maintain throughout their sexual lives will determine the course of epidemic for decades to come. They will continue to learn from one another, but their behavior will depend largely on the information, skills and services that the current generations of adults choose to equip their children with [6]. Therefore, the aim of this study was to assess the determinants of risky sexual behaviors among students of Mizan Aman College of Health Science, Southwest Ethiopia.

Methods and Materials

Study area and period: The study was conducted on students of Mizan Aman College of Health Science, Southwest Ethiopia, from Sep 15-25/2017. Mizan Aman College of Health Science is one of the government health science colleges in Southern Nations Nationalities and Peoples Regional State of Ethiopia. The college is located in Mizan Aman town, 591 KMs Southwest of Addis Ababa. Currently, the college trains students in seven different departments' namely Emergency Medical Technology, Health Extension Worker, Clinical Nursing, Midwifery, Health Information Technician and Medical Laboratory.

Study design: Cross sectional study design was used.

Inclusion criteria: All eligible students were included.

Exclusion criteria: Students who were unable to complete the questionnaire were excluded.

Sample size calculation

The sample size was calculated using single population proportion formula. It was calculated by taking the prevalence of sexual intercourse with commercial sex workers among Haromaya University students which was 52.7% [2]. Five percent margin of error with 95% confidence of certainty of any outcome was used (where n_f is the desired final sample size, n_i is the initial sample size, Z is the value of standard normal variable at 95% confidence interval, and P is the prevalence of sexual intercourse with commercial sex workers). For the population size was less than 10,000 finite population corrections (FPC) formula was used to get the final

sample size. Therefore, the final sample size with 10% non-response rate was 331.

Sampling technique

The sample size was proportionally allocated for each of the six departments based on the number of students in the departments. Then simple random sampling technique was used to pick the study subjects.

Data collection tool and procedure

Questionnaires were adapted from EDHS 2016 was used. The questionnaire was translated in to local languages (Amharic) and vice versa. Data for this study was collected by self-administrative questionnaires. Six data collectors and two supervisors were participated in the study. Data collectors and supervisors were given half a day orientation.

Data quality control

Data collectors and supervisors were given half a day orientation. Pre-test was conducted on 5% of the sample. Close supervision was conducted by field supervisors and investigators.

Data processing and analysis

Data was analyzed using SPSS version 20.0. Data was edited, cleaned, coded and entered using EPI data and then exported in to SPSS. Bivariate and multivariate logistic regression analysis was done to declare the determinants of risky sexual behaviors. P -value < 0.05 was used as a cut point to declare the determinant variables.

Definition of Terms

Risky sexual behavior: Refers to at least one of the following; unprotected sex, having many sexual partners, starting sex under age of 18 years and sexual intercourse with commercial sex workers in the last 12 months.

Inconsistent condom use: Refers to response option other than always (like rarely, never used and occasionally) about frequency of condom use during sexual contact.

Multiple sexual partners: Having two or more life time sexual partners in the last 12 months.

Substance use: Use of at least any one of the following substances: alcohol, khat cigarette, shisha, or hashish.

HIV risk perception: Students' attitude towards perceiving themselves as susceptible to HIV infection.

Result

Socio-demographic characteristics

A total of 331 study participants had completed the administered questionnaires with a response rate of 100%. The mean age of the study subjects was 20.4 years. Majority, 93 (28.1%), were Kaffa in Ethnicity. Or-

Table 1: Frequency distribution of Socio-demographic characteristics of the students in Mizan Aman Health Science College, Ethiopia, Sep 2017.

Variables	Frequency (N = 331)	Percent
Sex		
Male	69	20.8
Female	262	79.2
Age		
< 20	157	47.4
20-24	136	41.1
≥ 25	38	11.5
Ethnicity		
Bench	63	19.0
Kafa	93	28.1
Amhara	49	14.8
Oromo	21	6.3
Sheka	21	6.3
Dawro	24	7.3
Gurage	20	6.0
Others	40	12.1
Religion		
Orthodox	158	47.7
Protestant	134	40.5
Muslim	39	11.8
Marital status		
Single	263	79.5
Married	68	20.5
Educational status of the student		
Level 2/year 1	79	23.9
Level 3/year 2	169	51.1
Level 4/year 3	83	25.1
Department		
Health extension	120	36.3
Midwife	35	10.6
Clinical	72	21.8
Laboratory	52	15.7
Health Information Technique	43	13.0
Emergency Medical Technology	9	2.7
How is education?		
Well going	162	48.9

Somewhat good	137	41.4
Not going what i expected	32	9.7
Income		
≤ 500 birr	138	41.7
501-100	140	42.3
> 1000	53	16.0
Living arrangement		
With family	79	23.9
Alone	252	76.1
Father educational status		
Not read and write	75	22.7
Read and write	64	19.3
1-4	38	11.5
5-8	64	19.3
9-12	38	11.5
greater than 12 th	52	15.7
Mother educational status		
Not read and write	110	33.2
Read and write	56	16.9
1-4	53	16.0
5-8	60	18.1
9-12	32	9.7
Greater than 12 th	20	6.0
Residence		
Urban	167	50.5
Rural	164	49.5

thodox, 158 (47.7%), was the dominant religion in the study area (Table 1).

Risky sexual behaviours

About 116 (35%) had risky sexual behavior. Besides, 122 (36.86%) participants experienced sexual intercourse in their life time whilst 92 (75.4%) of these made sexual intercourse in the last 12 months. Among these, 15 (16.3%) of had more than one partner.

Fifty three (57.6%) started sexual intercourse before age of eighteen. Among those who make sexual intercourse, seventy two (78.3%) individuals reported never

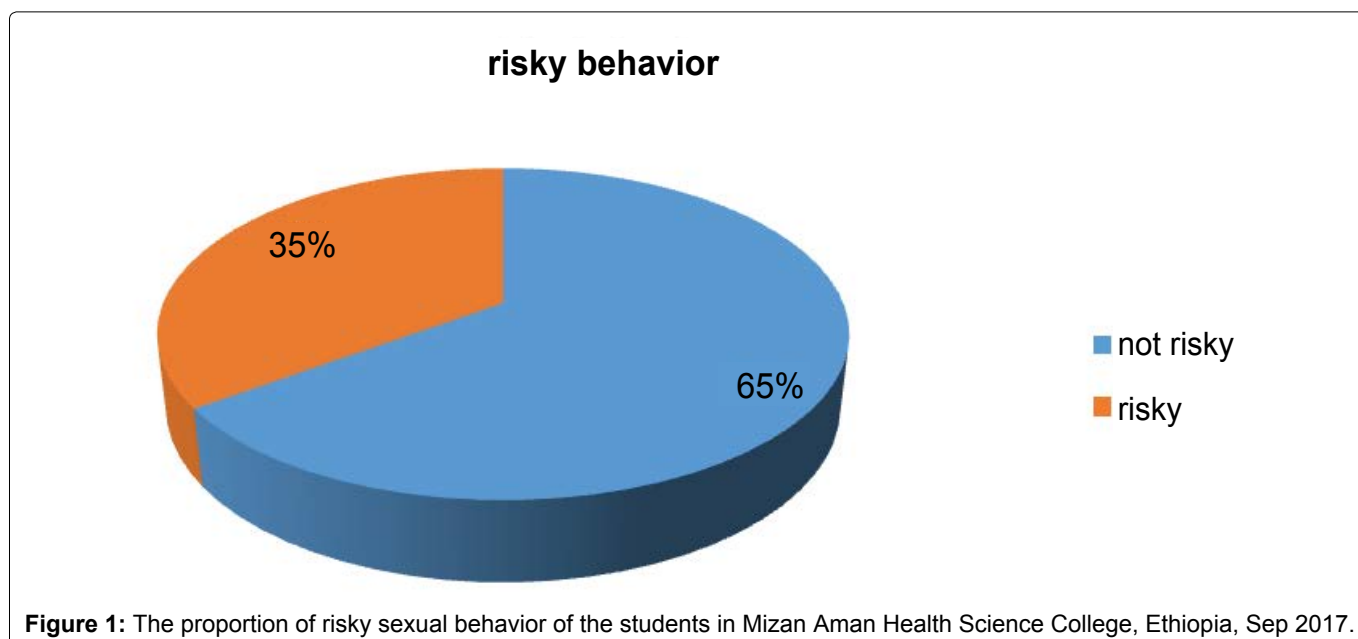


Table 2: Frequency distribution of knowledge related characteristics among students in Mizan Aman Health Science College, Ethiopia, Sep 2017.

Variables	Response	Freq. (N = 331)	%
Have you ever heard of an illness called AIDS?	Yes	305	92.1
	No	26	7.9
Can having one uninfected sex partner protect from getting HIV?	Yes	180	54.4
	No	151	45.6
Can people get the AIDS virus from mosquito bites?	No	220	66.5
	Yes	111	33.5
Can consistent use of condom reduce chance of getting HIV?	Yes	253	76.4
	No	78	23.6
Can people get the AIDS virus by sharing food with a person who has AIDS?	Yes	49	14.8
	No	282	85.2
Can abstaining from sexual intercourse protect from getting HIV/AIDS?	Yes	244	73.7
	No	87	26.3
Can people get the AIDS virus because of witchcraft, God's curse, or other supernatural means?	No	170	51.4
	Yes	161	48.6
Can a healthy-looking person possibly have the AIDS virus?	Yes	170	51.4
	No	161	48.6
Can people get the AIDS virus by sharing sharp materials such as razors/blades or through injection with non-sterilized needles?	Yes	255	77.0
	No	76	23.0

Table 3: Frequency distribution of risky perception of the students in Mizan Aman Health Science College, Ethiopia, Sep 2017.

Is HIV/AIDS series	Frequency (N = 331)	%
Yes	269	81.3
No	43	13.0
I don't know	19	5.7
Chance		
No chance	204	61.6
Low chance	44	13.3
Moderate	13	3.9
High	9	2.7
I don't know	61	18.4
Why low chance		
Never have sex	141	56.9
Abstain	21	8.5
Trust partner	60	24.2
No injection unsterile needle	16	6.5
Use condom	1	0.4
No contact HIV pt	9	3.6
If medium/high why		
Sex with HIV pt	2	9.1
No use condom	13	59.1
More than one partner	2	9.1
Sex with CSW	1	4.5
Condom tear	1	4.5
Unsterile injection	3	13.6
Behavior change prevent HIV		
No	152	45.9
Yes	179	54.1
Your behavioral change		
Yes	214	64.7
No	117	35.3

use condom. Inconsistent condom use was reported by 80 (86.9%) individuals. The research also revealed that 213 (64.5%) subjects had discussion with family on sexual matters (Figure 1).

Knowledge related characteristics

Around 305 (92.1%) of the study participants had heard about HIV/AIDS. Two hundred fifty three (76.4%) reported that people can reduce their chance of getting HIV/AIDS virus by proper use of condom. Besides, 150 (45.3%) students said both condom utilization and limiting sexual intercourse to one uninfected partner can reduce the risk of acquiring HIV/AIDS (Table 2).

Risky perception

About 269 (81.3%) claimed that HIV/AIDS was a severe problem in the community. Besides, 179 (54.1%) perceived that behavioral change can help to prevent HIV/AIDS (Table 3).

Substance abuse

Fifty seven (17.2%) reported history of alcohol drinking prior to the data collection period whereas 16 (4.8%) of the respondents reported that chewing.

Determinants of risky sexual behaviors

Multivariate logistic regression analysis was conducted to identify the determinants of risky sexual behaviors. Accordingly, perception of being at high risk of getting HIV, alcohol drinking, and younger age status were major determinants of risky sexual behaviors.

The study subjects between age of 20-24 were nearly three times (AOR = 2.9, 95% CI = 1.38, 6.13) more likely to be risky for sexual behavior as compared to those who were below 20-years-old. Besides, students who drank alcohol were nearly eight times (AOR = 7.77, 95% CI = 3.04, 19.87) more likely to be at risk of acquiring HIV/AIDS as compared to those who never drank alcohol (Table 4).

Discussion

The study assessed the determinants of risky sexu-

Table 4: Predictors of risky sexual behavior among students of Mizan Aman Health Science College, Ethiopia, Sep 2017.

Variables	COR	AOR
Age		
< 20 yrs	1	1
20-24	3.32 (1.95, 5.66)	2.91 (1.38, 6.13)
≥ 25	20.40 (8.16, 51.01)	8.72 (1.97, 38.72)
Mothers educational status		
Not read and write	1	1
Read and write	0.56 (0.28, 1.12)	0.25 (0.08, 0.78)
1-4	0.78 (0.40, 1.53)	0.81 (0.30, 2.19)
5-8	0.59 (0.31, 1.16)	0.49 (0.17, 1.37)
9-12	0.19 (0.06, 0.56)	0.13 (0.03, 0.59)
> 12 th	0.86 (0.33, 2.27)	0.99 (0.26, 3.77)
Chance of HIV		
Low	1	1
High	3.55 (1.44, 8.74)	3.97 (1.08, 14.59)
Alcohol		
No	1	1
Yes	2.43 (1.36, 4.34)	7.77 (3.04, 19.87)

al behaviors. The study revealed that 35% of the study participants were engaged in at least one of the risky sexual behaviors. This is consistent with the finding of a study conducted on students in Arbaminch University [7] whilst it is much higher than the study findings from studies conducted in Jiga High School and Haromaya University [1,2]. The difference might be due to the differences in the socio-cultural variations between the communities in the study institutions, but it needs further investigation.

The study revealed that among study subjects who experienced sexual intercourse in the last 12 months 16.3% had sexual intercourse with more than one partner. This result was much lower than studies conducted among students in Pawe Woreda High School and University of Gondar Ethiopia [7,8]. The disparity might be due to differences in the study settings and/or differences in the level of awareness among the communities of the respective institutions. Besides, the study further showed that 87% used condom inconsistently. This was higher than the finding from a study conducted on University students in Maroua, Cameroon [9]. The difference might still be attributed to the differences in the level of awareness about the benefits of condom utilization and risks of acquiring sexually transmitted infections.

The study showed that study subjects between ages of 20-24 were nearly three times more likely to be risky for sexual behavior as compared to those who were below 20-years-old. This finding is concordant with the findings of studies conducted in Gondar University, Ethiopia [10]. This could be because of the risk taking behavior among these age groups, resulting in increased risk of involving in sexual practice as the age increases.

Besides, students who drank alcohol were nearly eight times more likely to be at risk of acquiring HIV/AIDS as compared to those who never drank alcohol.

This finding is in line with the findings from studies conducted in Colombia and Uganda [11,12]. This might be due to the nature of alcohol that alters rational decision making ability, decrease inhibitions and increase risk taking behavior of across individuals.

Conclusion

Above one-third of the study subjects engaged in at least one of the risky sexual behaviors. Perception of being at high risk of getting HIV, alcohol drinking and younger age status were found to be major determinants of risky sexual behaviors.

Recommendation

Ethiopian Ministry of Education in collaboration with Federal Ministry of Health should conduct further studies on the distribution and determinants of risky sexual behaviors in academic institutions and work hard on strengthening Sexual Health Education in Schools. Mizan-Aman College of Health Science should strongly work on the awareness creation of students about risky sexual behaviors.

Declarations

Ethical approval

Ethical approval letter was obtained from Mizan-Tepi University. The participants were made aware about the purpose of study and oral consents were obtained accordingly. The participants' rights to refuse or withdraw from the study and confidentiality issues were considered.

Consent to publish

Not applicable.

Availability of data

All data are available in the article.

Competing interests

The authors' declare that they have no competing interests.

Funding

There was no funding.

Authors' contribution

NY, ID & FD took the role from conception to design and developed the proposal, supervised the data collection process, conducted the final analysis and report writing. TE drafted the manuscript. TE and WA critically reviewed and approved the final manuscript.

Acknowledgments

Our deepest gratitude and appreciation goes to Mizan Aman College of Health Science for supporting the research by supplying materials. We would also like to extend our great appreciations to the data collectors and supervisors.

References

1. Kassa GM, Degu G, Yitayew M, Misganaw W, Muche M, et al. (2016) Risky sexual behaviors and associated factors among Jiga High School and Preparatory School Students, Amhara Region, Ethiopia. *Int Sch Res Notices* 2016.
2. Tariku D, Lemessa O, Nega A (2012) Patterns of sexual risk behavior among undergraduate university students in Haromaya University, Ethiopia: A cross-sectional study. *Pan Afr Med J* 12: 33.
3. MJ Trepka, S Kim, V Pekovic, P Zamor, E Velez, et al. (2008) High-risk sexual behavior among students of a minority-serving university in a community with a high HIV/AIDS prevalence. *Journal of American College Health* 57: 77-84.
4. Tekletsadik Me. Higher education, higher risks.
5. (2003) UNAIDS, WHO, AIDS epidemic update, Sub-Saharan Africa. 7-14.
6. UNFPA (2002) HIV/AIDS prevention guidance for reproductive health professionals in developing country setting. The Population Council, 6-20.
7. Bikila S, Gemechu K (2015) Assessment of risky sexual behaviors among Arbaminch University Students, Arbaminch Town, SNNPR, Ethiopia. 3: 1000189.
8. Mulatu A, Tefera B, Tizta T, Muluwas A (2015) Risky sexual behavior and associated factors among High School Youth in Pawe Woreda Benishangul Gumuz Region. *Science Journal of Clinical Medicine* 4.
9. Noubiap JJ, Nansseu JR, Ndoula ST, Wang B, Jingi AM, et al. (2015) Prevalence and correlates of HIV-risky sexual behaviors among students attending the Medical and Social Welfare Center of the University of Maroua, Cameroon. *BMC Res Notes* 8: 635.
10. Shiferaw Y, Alemu A, Assefa A, Tesfaye B, Gibermedhin E, et al. (2014) Perception of risk of HIV and sexual risk behaviors among University students: Implication for planning interventions. *BMC Res Notes* 7: 162.
11. Cooper ML (2002) Alcohol use and risky sexual behavior among college students and youth: evaluating the evidence. *J Stud Alcohol Suppl* 101-117.
12. Mehra D, Kyagaba E, Ostergren PO, Agardh A (2014) Association between self-reported academic performance and risky sexual behavior among ugandan university students- a cross sectional study. *Glob J Health Sci* 6: 183-195.