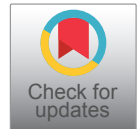




Research Article

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Substance Use and Risky Sexual Behaviour among Mizan Aman College of Health Science Students, Bench Sheko Zone, South West Ethiopia, Cross Sectional Study, 2019

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Abstract

Background: Substance use and its problems arising are increasing all over the world, and currently together with HIV/AIDS epidemic, become one of the most threatening and challenging social and public health problems. The objective of this study was aimed to fill information gap on substance use and risky sexual behavior among students in Mzan Aman College of Health Science, Southwest Ethiopia.

Methods: A Descriptive facility based cross sectional study was conducted in Mizan Aman College of Health Science using 299 students from June 1/2019 to June 30/ 2019. Simple random sampling technique was used to select eligible students. Self-administered questionnaire was used to collect data based on study objectives. Descriptive data such as frequency and percentage was carried out by using SPSS version 21.

Result: All 299 study participants responded and which yielding 100% response rate. Majority 222(74.2%) of participants were age between 18 to 24 years and 176(58.9%) were males. This study showed that overall prevalence of substance use among study population was 83 (27.75%). The most commonly used substance was chat 102(34.5%), followed by alcohol 72(24.1%) and illicit drugs (1.7%). Out of the total respondents, 188 (62.9%) had reported that they have had sexual experience in their life time. Study findings also indicated that 44 (14.7%) participants had multiple sexual partners in the last three months and 28 (9.4%) of males had sex with commercial sex workers.

Conclusion: The prevalence of substance use among Mizan Aman College of Health Science students was high. Study showed that the majority of the students were engaged in unsafe and risky sexual practices. So, awareness creation about safe sex practice should be promoted by responsible bodies such as government officials, college managers and volunteers who work on reduction and prevention of sexual transmitted diseases burdens among young populations.

Keywords

Substance use, Risky sexual behavior, College students, Mizan Aman, Ethiopia

List of abbreviations

AIDS: Acquired Immune Deficiency Syndrome; CSW: Commercial Sex workers; EDHS: Ethiopian Demographic and Health Survey; HE: Health Extension; HIT: Health Information technicians; HIV: Human Immuno Deficiency Virus; Km: Kilometers; MSC: Master of Science; MSP: Multiple Sexual Partner; MACOHS: Mizan Aman College of Health Science; MTU: Mizan - Tapi University; SNNPR : Southern Nations, Nationalities and Peoples Region; SPSS: Statistical Package for Social Science; PI: Principal Investigator; RH: Reproductive Health; SRH: Sexual and Reproductive Health; STD: Sexually Transmitted Disease; STI: Sexually Transmitted Infections; VCT: Voluntary Counseling and Testing; WHO: World Health Organization

Background

Substance use and its problems arising are increasing all over the world, and currently together with HIV/AIDS epidemic, become one of the most threatening and challenging social and public health problems [1]. The global burden of substance use is substantial, accounting for 8.9% of productive life lost annually [2].

The rapid mental, social, and cultural transitions that most students are now experiencing have created a breeding

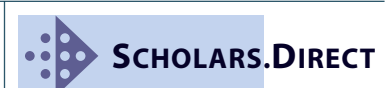
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ground for increased and socially disruptive use of alcohol and drugs [3].

In recent years, researchers have begun to investigate the intersection of alcohol or drug use and sexual "risk behaviors" – activities that put people at increased risk for sexually transmitted diseases (STDs), unintended pregnancy, and sexual violence. Studies conducted previously indicated that drinking and illicit drug use often occurs in association with risky sexual activities [4,5].

So, the aim of this study is to assess the prevalence of substance use and risky sexual behaviors among Mizan Aman College of Health Science students. The study is crucial for initiating and strengthening proper educational and interventional programs on substance use and risky sexual behaviors among college students.

Methods

Study area

This study was conducted in Mizan Aman College of Health Science, Bench Sheko Zone, South West Ethiopia. Mizan Aman College of Health Science is one of the four Governmental Health Science Colleges in the South Ethiopia and it was established in 1999 E.C. The College had began to train rural health extension workers who were supposed to provide basic health care services such as family planning methods, advising women to attend antenatal care and importance of health facilities delivery, and working on reduction of morbidity and mortality of neonates. Nowadays, Mizan Aman College of Health Science advanced its training on varied mid-level health care professionals. Currently, there are a total of 2500 students who are attending their classes in six departments such as comprehensive Nursing, Midwifery, Medical Laboratory Technicians, Health Extension Practitioners, Health Information Technicians, Emergency Medical Technician and Pharmacy Technicians.

Study design and period

A facility based cross-sectional study was carried out from June 15/2019 to June 30/ 2019.

Source population

All Mizan Aman College of Health Science students who are attending their class on 2018/19 academic year.

Study population

All sampled students who were selected by random sampling technique.

Inclusion and exclusion criteria

Inclusion criteria: Students who are attending their class on study period in Mizan Aman College of Health Science.

Exclusion criteria: Students who are not comfortable for any reason during data collection were excluded.

Sample size determination

Sample size was determined by using single population proportion formula. The overall prevalence of "ever used

substance" for at least one "substance" is 72.7% from study done among college students in south west Ethiopia [5]. To obtain maximum sample size at 95 % certainty and a maximum discrepancy of 5% between the sample and the population, an additional 10 % were added to the sample size as a contingency for non response.

Therefore:

$$n = 2 \frac{(z\alpha)^2 p(1-p)}{d^2}$$

Where n = Sample size (the desired sample size)

$Z\alpha/2$ = Standard variation (1.96)

p = Prevalence= 72.7% = 0.727

d = margin of error = 5% = 0.05

$$n = \frac{(1.96)^2 0.727(1-0.727)}{(0.05)^2} = 305$$

Since, the total Mizan Aman College of Health Science students at the study area is less than 10,000 finite population correction formulas was used.

$$nf = \frac{n}{1 + n/N} \text{ where, nf = the final sample size}$$

$$= 305/1 + 305/2500 \quad n = \text{predetermine sample size}$$
$$= 272$$

N = total college students attending 2018/19 G C at Mizan Aman College of Health Science students.

Adding 10% of non-response rate, final sample size was 299.

Sampling technique and procedure

A total of six departments were stratified to Medical Laboratory Technology, Comprehensive Nursing, Pharmacy, Health Information System, Health Extension and midwifery. Simple random sampling method is used to select study participants from a list of students obtained from MACOHS registrar office. The sample size in each department is proportional allocated to the total number of students.

Data collection tools and methods

Data was collected using structured interviewer-administered questionnaire which was prepared in English. The questionnaire had three parts: socio-demographic variables, substance use habits and sexual behavior questions. The questionnaire was pretested by using 5% [6] sample size prior to the actual data collection in Aman Poly Technic College students in the same town but different teaching institution. Study participants told to participate voluntarily basis and confidentiality was maintained to encourage accurate and honest self-disclosure. 3 diploma holder and 2 Bsc nurses conducted interview. Interview was conducted in private room. Supervisors and principal investigators closely followed the accuracy and completion of each questionnaire immediately after interview conducted.

Study Variables

Dependent variables: Magnitude of Substance use

Independent variable

- Sociodemographic variables
- substance use habits
- Students risky sexual behaviours

Data quality assurance

Questionnaire was pre-tested and its reliability was checked. Data collectors and supervisors trained for one day on topics such as how to check the completeness and proper filling of questions on daily basis. Data was entered using epidata version 3.1 and exported to statistical software for social sciences version 21 for analysis purpose.

Data processing and analysis

Data was checked for missing values, cleaned and coded before main analysis procedures. Later the data was organized and presented using proportion, summary statistics, table and frequencies.

Result

Socio-demographic characteristics

Total of 299 students were participated in the study yields 100% response rate. Majority 289(96.6%) of study participants were age between 18 to 30 years. From the total participants, 176(58.9%) were males and 123(41.1%) were females, 112(37.5%) were attended level III educational level. About 130(43.5%) of study participants were Ethiopian-Orthodox religion followers (Table 1).

Substance use behaviours

Among the respondents, 116(38.8%) were reported that they used substances at least once in their life time. Commonly used substances were chat 40(34.5%), alcohol 28(24.1%) and 2(1.7%) used illicit substances like hashish. The rest 46 (39.6%) from total substance users, were involved in more than one substance use; i. e 34(29.3%) were chat and alcohol used, 6(5.2%) used multiple substances such as chat, cigarette, and alcohol. 1(0.9%) used chat and hashish the rest 3(2.6%) used almost all above mentioned substances in their lifetime.

Nearly, quarter of respondents 83(27.75%) were current substance users. From these 31(37.5%) reported that they were currently khat chewers (in the last 3 months). Concerning alcohol drinking habits, 22 (26.5%) responded that they drank alcohol in the last three months, 25(30%) used both alcohol and chat (Figure 1).

Reasons for substance use

Different reasons were mentioned by students for the use of substances. Substances used by students in order to increase academic performance 25 (21.6%), to get personal pleasure 25 (21.6%), to stay awake 17 (14.7%), due to peer

Table 1: Socio demographic characteristics of Mizan Aman College of Health Science students, 2018/19(n = 299).

| Characteristics | Frequency | Percentage (%) |
|---|-----------|----------------|
| Sex | | |
| Male | 176 | 58.9 |
| Female | 123 | 41.1 |
| Total | 299 | 100 |
| Age group | | |
| 18 | 5 | 1.7 |
| 18-24 | 222 | 74.2 |
| 25-30 | 67 | 22.4 |
| 30 | 5 | 1.7 |
| Total | 299 | 100 |
| Level | | |
| Level I | 46 | 15.4 |
| Level II | 72 | 24.1 |
| Level III | 112 | 37.5 |
| Level IV | 69 | 23.1 |
| Total | 299 | 100 |
| Religion | | |
| Orthodox | 130 | 43.5 |
| Muslim | 59 | 19.7 |
| Protestant | 93 | 31.1 |
| Catholic | 15 | 5.0 |
| Others | 2 | 0.7 |
| Total | 299 | 100 |
| Ethnicity | | |
| Bench | 63 | 21.1 |
| Keffa | 78 | 26.1 |
| Oromo | 35 | 11.7 |
| Amhara | 53 | 17.7 |
| Woliata | 22 | 7.4 |
| Gurage | 19 | 6.4 |
| Others | 29 | 9.7 |
| Total | 299 | 100 |
| Marital status | | |
| Single | 212 | 70.9 |
| Married | 67 | 22.4 |
| Cohabiting | 11 | 3.7 |
| Divorced | 5 | 1.7 |
| Separated | 4 | 1.3 |
| Total | 299 | 100 |
| High school attended | | |
| Public/governmental high school | 254 | 84.9 |
| Private high school | 41 | 13.7 |
| Religious/missionary high school | 4 | 1.3 |
| Total | 299 | 100 |
| Monthly income (birr) | | |
| <500 | 96 | 33.1 |
| 500-999 | 153 | 52.8 |
| 1000-1500 | 36 | 12.4 |
| >1500 | 5 | 1.7 |
| Total | 299 | 100 |
| Residence before joining college | | |
| Urban | 169 | 56.5 |
| Rural | 130 | 43.5 |
| Total | 299 | 100 |

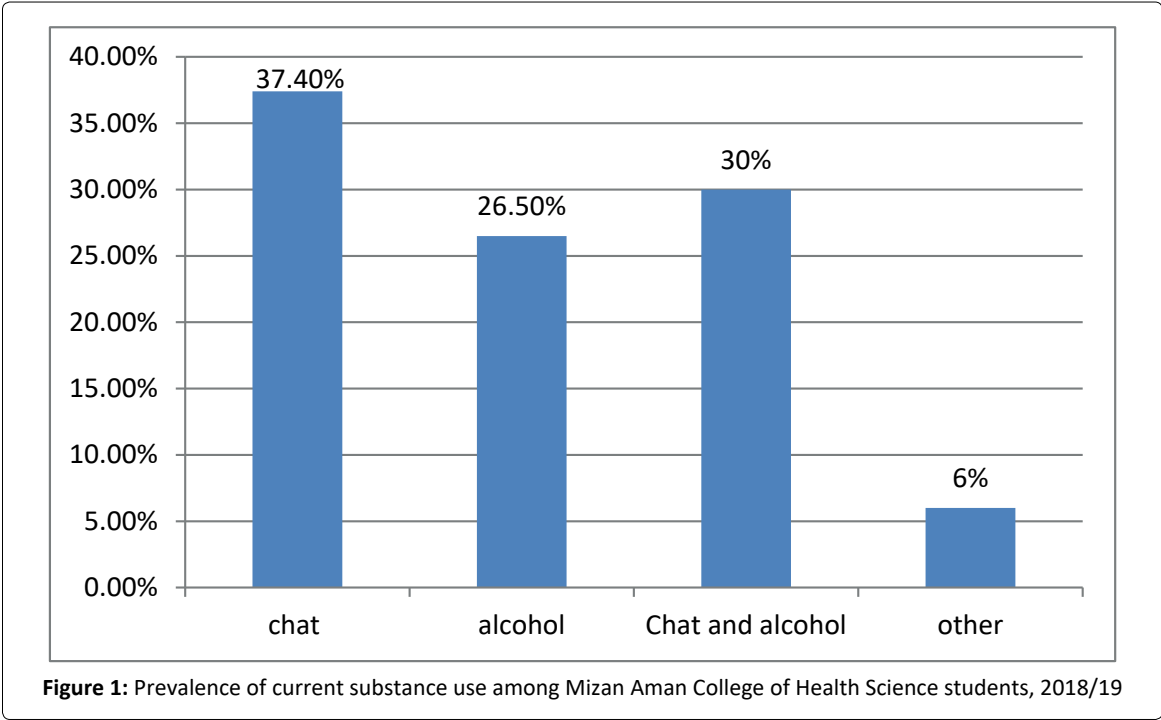


Figure 1: Prevalence of current substance use among Mizan Aman College of Health Science students, 2018/19

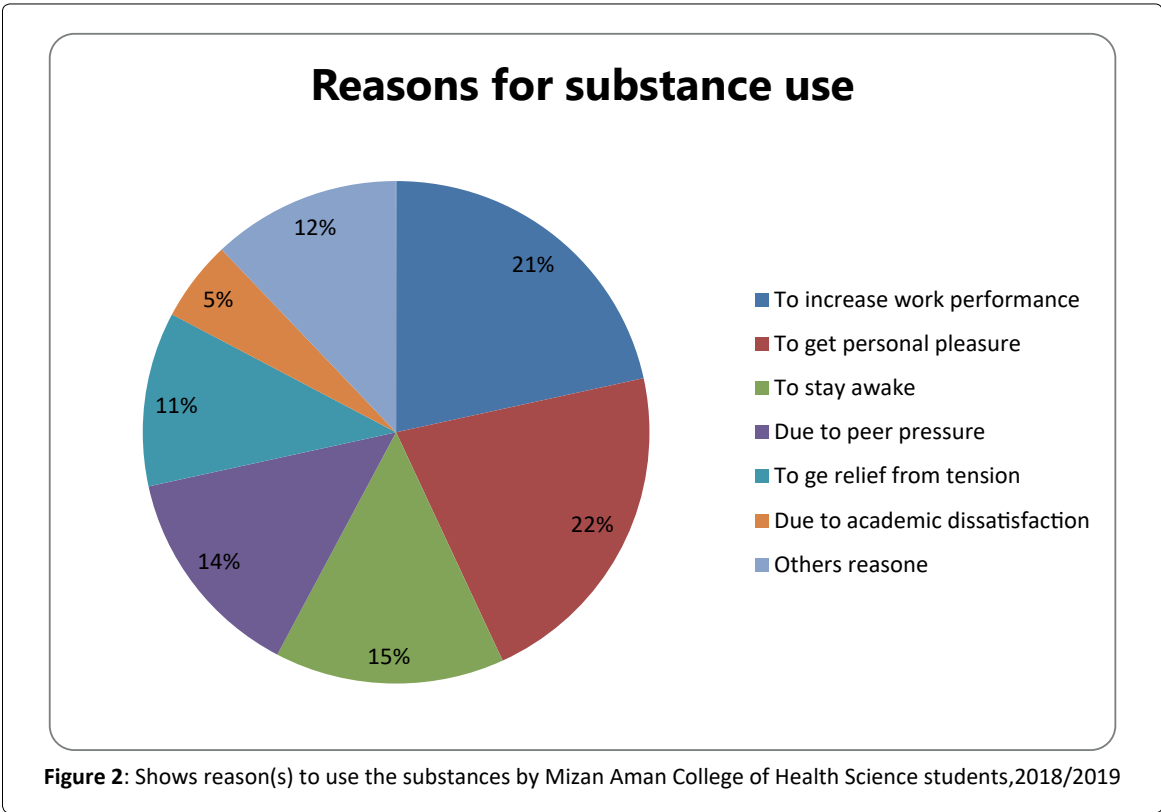


Figure 2: Shows reason(s) to use the substances by Mizan Aman College of Health Science students, 2018/2019

pressure 16(13.7%), to get relief from tension 13(11.2%), due to academic dissatisfaction 6(5.2%) and other reasons 14(12%) (Figure 2).

Sexual behaviors of respondents

Out of the total respondents, 188 (62.9%) reported that previous sexual experience. Regarding their marital status; 212(70.9%) were single, 67(22.4%) married, cohabitating 11(3.7%), divorced 5(1.7%) and separated 4(1.3%). From the

188 sexually activity exposed respondents, 93(49.5%) had their first sex before joining the college and the rest 95(50.5%) respondents after joining the college.

The main reasons for initiating sex were related to personal interest or curiosity 56(29.8%), marriage 43(22.9%), promising word from partner for marriage 40(21.3%), peer pressure 38(20.2%), to pass examination 5(2.7%), forced sex 3(1.6) and other reasons 3(1.6%).

From 188 sexually active students, 110(58.5%) had at least one of the risky sexual behaviors. i.e. 44(23.4%) had multiple sexual partners in the last three months 76(40.4%) of sexually active students used condoms during the last sex but few students 15(7.95%) reported consistent use of condom. According to study finding, 39(20.8%) of students reported that they had started sexual intercourse before the age of 18 years and 39(20.8%) of males had sex with commercial sex workers.

Regarding use of contraceptive methods, 158 (84%) were used short acting contraceptive methods and the remaining 30(16%) didn't use any. Commonly used contraceptive methods are 54(28.7%) used pills, 25(8.4%) used Depo-Provera respectively.

7. Discussion
This study finding showed that overall prevalence of substance use was 27.8% (95% CI: 22.80-32.80). Chat and alcohol are highly used substances by study participants when compared with illicit substance, 34.5%, 24.1% and 1% respectively. The finding is lower when compared with study done in Kenya which was 69.8% [7] and study done in Nigerian among high school students showed that 66% of prevalence of substance use found [8]. The possible reason for this discrepancy may be the variation of income and living conditions of study participants.

Our study finding indicated that high number of students are using substance when compared with study conducted in North West part of Ethiopia which was 17.5% [4] but lower than the study finding among Jimma University students which was 30.8% [9]. The difference might be due to the availability of substance in the study areas where these institutions are found and income level of college students and University students is not similar.

Study finding indicated that chewing chat was for the reasons like to increase academic performance, to get personal pleasure, to stay awake and due to peer pressure. This is in line with other study findings in Jimma, Gondar and Butajira [4,9,10].

It is apparent from the lifetime prevalence data that very few students had tried illicit substance. This might be due to students didn't get these illicit drugs easily, and the possession and use of these drugs results in penalty under the law of the country.

Out of the total respondents, 188 (62.9%) of students had sexual activities experience. From those 110(58.5%) had at least one of the risky sexual behaviors. The mean age of sexual initiation (19.69 years) were comparable with other studies done among youths in Dire Dawa town and AAU students [11,12]. However, the median age at first sexual debut of this study is greater almost by two years than the national survey result of EDHS (2005) which is 16.1 years [12].

This might be due to the difference in educational status of students with the general population. In this study, 62.9% of the participating students admitted having sexual experience which accounts 32.01% for males and 30.03% for females. This result is much lower than study done in GCMS but similar to the study done in AAU students [12,13]. This might be due

to the difference in cultures, attitudes and life style which led students towards sex.

The condom use rate during last intercourse among those sexually active students is 25.4%, but consistent condom use was reported by only 9% of students. The result is higher when compared to a study done among students of Gondar College of Medical Sciences, where 6.4% students used condom consistently [13].

Sexual experience with commercial sex workers is reported by 28.9% of male students, which is higher than the study conducted in Gondar College of Medical Science students which was 7.8%. This might be due to the difference in cultures, attitudes and income status which lead male students more exposed towards commencing sex workers.

Conclusion

The prevalence of substance use among Mizan-Aman College of Health Science students is high. Reasons forwarded for substance use from respondents include: To work/study hard from chewers and to get personal pleasure from drinkers. The study also showed that the majority of the students who were sexually active engaged in unsafe and risky sexual practices. Responsible bodies such governmental official in district, religious leaders, non-governmental organizations and media should pay attention toward improving of college students' behaviors and habits that may help them to restrain from using those substances.

Strength and limitation of the study

Even though study tried to show magnitude of substance use among college students, it has the following limitations

- Cannot identify factors that positively or negatively affecting substance use.
- Self-reported information is subjected to reporting errors, missed values and biases
- Students may not report substance use because social desirability bias.
- Study design limitation is also considered.

Declarations

Ethics approval and consent to participate

Ethical approval letter was obtained from Mizan Tepi University Institution review committee. The benefit and fully right to take part in the study as well as right to withdraw if there is any discomfort was clearly stated to participants. Confidentiality was maintained by using anonymous questionnaire. Questionnaire was distributed after written informed consent from participants obtained, volunteers filled questionnaire and supervisors followed it.

Author's contribution

TT: Contributed for this study by originating the study concept, formulating study designing, controlling data quality and analyzing data, reporting finding and manuscript preparation.

GC: Equal contributor: Involved in originating the study concept, formulating study designing, controlling data quality and analyzing data, reporting finding and manuscript preparation

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