Descriptive Study on Magnitude of Substance Abuse among Students of Aman Poly Technique College Students, Bench Maji Zone South West Ethiopia

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Abstract

**Background:** The world drug problem continues to constitute a serious threat to public health and to the safety and well-being of humanity. It is also one of the most burning public health problems in Ethiopia. There is research evidence that showed increment of trend of substance abuse among high school and college students.

**Objective:** To assess the magnitude of substance abuse among students of Aman Poly Technique College in 2016.

**Methodology:** A descriptive quantitative cross-sectional study was conducted to assess the magnitude of substance abuse among students of Aman Poly Technique College.

**Results:** The overall prevalence of substance abuse was 42.5%. The commonly used substances were chewing 65%, Alcohol 28% and cigarette 4.8%. And the reasons to initiate substance abuse were peer pressure were 36.8%, to relieve from tension 20% and academic dissatisfaction were 18.4%.

**Conclusion:** According to this study we conclude that chat was the most abused substance followed by alcohol and peer pressure was the most significant reason to initiate substance abuse.

Keywords: Substance; Use; Chat; Alcohol

Introduction

The world drug problem continues to constitute a serious threat to public health and to the safety and well-being of humanity-particularly children, young people and their families [1]. About 230 million people or 5 percent of the world's adult population are estimated to have used an illegal drug at least once in 2010. Alcohol and other drug (Khat and tobacco) users number about 27 million, which is 0.6 percent of the world adult population [2].

The United Nations Office on Drugs and Crime reports while drug use is stabilizing in industrialized countries, it is increasing in developing nations [3]. In Ethiopia a national study reported 23.0% of out-of-school and 7.5% of in-school adolescents use khat [4]. A separate study estimated prevalence of khat use in the general population of Ethiopia was 27.3% among men and 11.0% among women of 15-49 years in 2011 [5]. Heavy consumption of khat is associated with euphoria, hyper activity, anorexia, insomnia, lethargy and depression. In addition to combined use of alcohol and khat could increase sexual risk behavior contributing to spread of HIV [6,7].

In Ethiopia there is research evidence that indicate substance abuse is also increasing among high school and university student [8]. Substance use remains as an important area of research due to the implications of early substance dependence on the future of the youth [9].

Mizan Aman town is one of developing urban center and becoming educational hub of the country, it is expecting that the increasing trend of substance abuse among school student might be similar for our study area. Knowing the current magnitude of substance abuse have importance for future anti substance use behavioral change program, thus this study was conducted with the aim of assessing magnitude of substance abuse among students Aman Poly Technique College, South west Ethiopia.

Methods

**Study setting and design**

A descriptive quantitative cross-sectional study design was conducted among students of Aman Poly Technique College.

Aman Poly Technique Collage was established in 1994 E.c and started its work in the same year by four departments with the total number of less than two hundred students. Currently the college has 885 students, studying 8 fields of technique and vocational education with different level; Level I, Level II and Level III.
Study participants

Regular students of Aman TVET College in Aman town obtained by sampling during the specified study period were included in the study.

Sample size and sampling

The formula that we used to calculate sample size in the study was single population proportion formula. Prevalence of point under consideration was (P=50% because to the extent of our knowledge and searching effort, no P value has been obtained about the magnitude of substance abuse in the study area). So the 384 sample size was computed and after using correction formula hence our total population is less than 10,000 the final sample size became 268.

We were used stratified random sampling method followed by simple random technique to select individual students that are to be included in our sample size. Using stratified random sampling method, the total numbers of students in the college were first divided into different strata based on their departments and level of study. Sample was allocated to each departments and level of study proportionally. Finally, simple random lottery method was used to select study participants using sampling frame of students list (Table 1).

Results

Socio-demographic characteristics

A total of 285 study participants were participated in the study which makes 97% of response rate. One hundred eighty-one (61.5%) of the study participants were males and the rest 38.5% were females. One hundred respondents (49.1%) of the sample in the age interval of 22-26 years. Almost half 146 (49.5%) respondents were Bench by ethnic group. One hundred nine 109 (37.1%) were Orthodox Christian by their religion followers (Table 2).

Concerning academic year 110 (37.4%) were first year students. Majority 192 (65.5%) were came from rural areas. Concerning income 86% (28.3%) reported that there is habit of substance use in their family.

Table 1: Showing proportional allocation of sample size in each department and level, May 2016.

| Department | Number of students by level | Allocated sample by level |
|------------|-----------------------------|---------------------------|
|            | I  | II | III  | I  | II | III  |
| Survey     | 47 | 69 | 74   | 16 | 23 | 25   |
| Automotive | 21 | 33 | 42   | 7  | 11 | 14   |
| Masonry    | 39 | 55 | 73   | 13 | 18 | 24   |
| ICT        | 27 | 33 | 42   | 9  | 11 | 14   |
| GMFA       | 8  | 15 | 12   | 3  | 5  | 4    |
| Sanitary   | 21 | 28 | 30   | 7  | 9  | 10   |
| Auto electric | 52 | 73 | 37   | 17 | 24 | 12   |
| Road and construction | 24 | 9  | 21   | 8  | 3  | 7    |

Table 2: 

| Variable          | Frequency | Percentage |
|-------------------|-----------|------------|
| Sex               |           |            |
| Male              | 181       | 61.50%     |
| Female            | 113       | 38.5       |
| Age category      |           |            |
| 18-22             | 96        | 32.70%     |
| 23-26             | 144       | 49.10%     |
| 27-30             | 54        | 18.20%     |
| Religion          |           |            |
| Orthodox          | 108       | 37.07%     |
| Muslim            | 62        | 21.43%     |
| Protestant        | 102       | 34.69%     |
| Catholic          | 14        | 4.76%      |
| Others            | 8         | 2.04%      |
| Ethnicity         |           |            |
| Amhara            | 116       | 36.2%      |
| Bench             | 146       | 49.5%      |
| Kaffa             | 28        | 9.5%       |
| Oromo             | 8         | 2.7%       |
**Table 2:** Socio-demographic characteristics of Aman Poly Technique College students, May 2016.

**Magnitude of substance use**

Of the total of study participants 125 (42.2%) reported that they have experience of using substance at least once in their life time. Among users more than three fourth 107 (85.6%) were males. Concerning type of substance reported by users were chat, alcohol and cigarette by 24.3%, 68.2% and 3.7% study respondents, respectively, as shown in Table 3.

| Variable       | Male          | Female         |
|----------------|---------------|----------------|
| Abide all      | 107           | 18             |
| Abide all      | 85.60%        | 14.40%         |
| Alcohol drinking | 26           | 7              |
| Alcohol drinking | 24.30%       | 38.90%         |
| Chat chewing   | 73            | 9              |
| Chat chewing   | 68.20%        | 50%            |
| Cigarette smoking | 4            | 2              |
| Cigarette smoking | 3.70%        | 11.10%         |

**Table 3:** Frequency of male and female substance users among Aman TVTE College students, May 2006.

**Current substance users**

Of the total 7 (6%) were current users of any substance. Among type of substance alcohol were used by 3 (42.8%), chat 3 (42.8%) and cigarette 1 (14.2%) as shown in Table 4.

| Variable       | Male          | Female         |
|----------------|---------------|----------------|
| Abide all      | 107           | 18             |
| Abide all      | 85.60%        | 14.40%         |
| Alcohol drinking | 26           | 7              |
| Alcohol drinking | 24.30%       | 38.90%         |
| Chat chewing   | 73            | 9              |
| Chat chewing   | 68.20%        | 50%            |
| Cigarette smoking | 4            | 2              |
| Cigarette smoking | 3.70%        | 11.10%         |

**Table 4:** Frequency of current and ever substance users among Aman Ploy Technique College.

**Time of initiation for substance use**

Concerning initiation time of substance use, more than majority 66.40 of substance users reported than they started at college level followed by 24% at high school and preparatory school, as shown in Figure 1.

**Patterns of substance abuse**

Out of 125 abusers 17 (13.6%), 13 (10.4%), 22 (17.6%), 49 (39.2), 13 (10.4%) and 11 (8.8%) abuse daily, twice a day, once a week, 3-4 times a week, twice a week and sometimes respectively. In case of Duration of substance abuse 32 (25.6%) use less than one year, 39 (31.2%) use 1-2 year, 35 (28%) used 2-4 years and 19 (15.2%) used greater than 4 years. Greater than 62.4% spent 15-20 birr per day, 23.2% spent less than 15 birr per day and 14.4% spent greater than 20 birr per day.

**Figure 1:** The time in which students started to use abused substances among Aman TVET students, May 2016.

From reason to initiate substance abuse peer pressure accounts 36.8% and academic dissatisfaction, to relieve from tension, to get personal pleasure and availability of substance account 18.4%, 20%, 16% and 8%, respectively (Table 5).
Discussion

This study was conducted with the aim of assessing magnitude of substance abuse among Aman Poly Technique student. The finding of this study showed that chat was the most abused substance; 65% of study participants ever chew chat. The finding was much higher than other studies in Ethiopia, Adigrat (14.7%) [10], Haramya University (30.3%) [11] and Axum University (28.7%) [12]. Concerning current school student in Ethiopia (0.8%) [16] but it much lower than other studies in Ethiopia, Adigrat (14.7%) [10], Haramya University (41%) [11] and Mekelle University (82.7%) [13]. Concerning the current use of chat, this study revealed that 42.8% of study participants had current use of chat [13]. This finding also higher than study conducted in Adigrat University (9.33%) [10], Jimma University (33.1%) [14], Axum (27.9%) [12] and Mekelle University (25%) [13].

Ever use alcohol among these study participants was 28%. This finding was much higher than study conducted among Iranian student (16%) [15]. But it is lower than Adigrat (56%) [10], Haramaya (53.8%) [11] and Mekelle University (82.7%) [13]. Concerning the current use of alcohol was 1.05%, this finding was lower than study conducted Adigrat (31.3%) [10], Axum University (32.8%) [12], Mekelle University (41%) [13] and Jimma University (36.4%) [14] (Figure 2).

Table 5: Pattern of substance abusing practice among students of Aman Poly Technique SNNPR, Mizan, May 2016.

| Duration of substance abusing | Twice a week | 10.40% |
|------------------------------|-------------|--------|
| Sometimes                    | 11          | 8.80%  |
| <1 year                      | 32          | 25.60% |
| 1-2 years                    | 39          | 31.20% |
| 2-4 years                    | 35          | 28%    |
| >4 years                     | 19          | 15.20% |

| Amount of substance abused per day | <15 birr | 23.20% |
|------------------------------------|----------|--------|
| 15-20 birr                         | 78       | 62.40% |
| >20 birr                           | 18       | 14.40% |

Figure 2: Reasons to initiate substance abuse among Aman TVET College students, May 2016.

Ever smoke of cigarette among these study participants was 2.1%. This finding was higher than study conducted Ayer Tena secondary school student in Ethiopia (0.8%) [16] but it much lower than other studies, Preparatory students at Ginner town (8.5%) [17] and Zambia Adolescent (27%) [18].

Conclusion

Substance abuse among Aman Poly Technique College student was prevalent, the most abused was chat chew followed by alcohol and cigarette smoking. The study call up for health education activities for this target groups and the need of further research around the study area.

Authors Contribution

MG was responsible for the study design and implementation, data analysis, and drafting the manuscript. BA & MA reviewed the study design and manuscript revisions. MT participated in the data analysis and manuscript revisions. All authors read and approved the final manuscript.

Competing Interests

The authors declare that they have no competing interest.

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